Annual Index

to

ELECTRICAL ENGINEERING

for

Volume 77, 1958

This section contains complete multientry indexes covering the contents of *Electrical Engineering* for the calendar year 1958. It includes all special articles and authors, all news items, and all items published in *Electrical Engineering* on AIEE technical program papers, whether they appear in the form of a digest, essentially full text, or full text. The technical program papers are indexed also by both title and author.

With further reference to technical program papers, if a *Digest* appears, it will be listed as (Digest of 58-000). If the essentially full text or the full text appears, it will be listed simply as (58-000).

The contents are arranged according to **Subject** and **Author Index** listing articles and authors; **News Index** listing all items that appeared in Institute Activities, Of Current Interest, and Electrical Engineering Education sections, with a **Biographical Index** of personal and obituary items on AIEE members.

Page Allocations by Issues

January	1-118
February	119-202
March	203-282
April	283-382
May	383-478
June	479-574
July	575-668
August	669-776
September	777-888
October	889-996
November	997-1076
December	1077-1162

Subject Index

Abstracts of Articles from Soviet Technical Publications 703
A-C Group Drives for Modern Textile Machines, Helmick 498-500
A-C Mining, National and State Electrical Requirements for. Brown 910-12
Accreditation of Engineering Curricula, ECPD, Chambers, Branigan 686-8
Accurate Analog Frequency Measuring Circuit, An. Mitchell 912-14
Accurate Determination of Capacitance by Conjoining Analytical and Analog Techniques, The. Horgan, Pesavento. (Digest of 58-63) 513
ACSR, Current-Carrying Capacity of. House, Tuttle. (Digest of 58-41) 719
Aging in Pure Oxygen and in a Vacuum, Insulation. Whitman. (Digest of 58-119) 781
AIEE in Electrical Insulation, Role of. Berberich 1099-1101
AIEE Student Branch: A Co-Curricular Activity, The. Hickernell 1034-5
(AIEE) The Institute and Electrical Insulation. Hickernell 1097-9
Air Breakers, Leakage-Flux Suppression in Magnetic. Strom. (Digest of 58-21) 317
(Air Surveillance) Communication Channels for SAGE Data Systems. James. 792-7
Airborne Teletypewriter *AN/AGC-1*. Michals. (Digest of 58-47) 597
Aircraft Carriers, Special Power and Lighting Systems on. Cole, Garbacz. (Digest of 58-567) 1014
Alternating or Constant Magnetic Fields, Iron Wire Exploration of. Moore 1124-6
Aluminum Bus Conductor, Silver Plated. Burley. (Digest of 58-875) 892
AN/AGC-1, Airborne Teletypewriter. Michals. (Digest of 58-47) 597
Analog Computer Study of a Torsional Vibrations Problem, An. Gray, McElhenny. (Digest of 58-502) 1109
Analog Frequency Measuring Circuit, An Accurate. Mitchell 912-14
Analysis, Component Current Method of Circuit. Su. 947-50
Analysis of a Servomechanism with Backlash by the Ritz-Galerkin Method, An. Ogata, Atkinson. (Digest of 58-86) 1026
Analysis of Transformer Load Cycles, Thermal. Bennon. (Digest of 58-55) 495
Analytical and Analog Techniques, The Accurate Determination of Capacitance by Conjoining. Horgan, Pesavento. (Digest of 58-63) 513
Analytical Studies of Lightning Performance of 138-Kv Double Circuit Lines of the Commonwealth Edison Company, Caswell, Gross, Koncel. (Digest of 58-14) 1007
Anniversary Celebration, The Institute's 75th. Hickernell 889-91
Antenna System, A New Broadband Microwave. Friis, May. (58-185) 502-06
Appliances Noise Control of Domestic. Plunkett 1106-08
Application of Vacuum Switches to Utility Loads. Rittenhouse 414-17
Application Vacuum Switch, The Power. Sorensen 150-4
Arabian Pipe Line Company, Intermediate Gas Turbine Pumping Units of Trans-. Nibley, Hillman 158-62
Arc Recovery Strength Measurements, Impulse System for Cobine, Burger, Farrall. (Digest of 58-902) 807
Arc Voltage on Recovery Voltage, Effect of Current Cutoff and. Concordia. (Digest of 58-111) 791
Arrester Destruction on the Pennsylvania Power and Light Company 220-Kv System, Breaker Restriking and. Galiyano, MacArthur, Mackenzie. (58-94) 308-11
Artificial Cooling of Livestock in Hot Climates. Kelly, Bond, Ittner. (Digest of 58-1007) 1102
Automatic Telegraph Switching System Plan 55-A. Vernam. (58-45) 418-23
(Aviation) Electrical Frontiers in Space. Fanuef 895-7

B

Backlash by the Ritz-Galerkin Method, An Analysis of a Servomechanism with. Ogata, Atkinson. (Digest of 58-86) 1026
Balancing Reactors for Semiconductor Rectifiers, Current. Dortort. (Digest of 58-219) 589
Basic Impulse Insulation Levels, Standard. (Committee Report) 727-9
(Basic Sciences) An Electric Circuit Theory Approach to Finite Difference Stability. Karplus. (Digest of 58-60) 622
(Basic Sciences) Dimensions for a Unified Theory of Electromechanics. Allen 134-40
(Basic Sciences) Temperature Rise of Solid Junctions. Diebold. (Digest of 57-144) ..163
(Basic Sciences) The Accurate Determination of Capacitance by Conjoining Analytical and Analog Techniques. Horgan, Pesavento. (Digest of 58-65) 513
Basis for Transmission Performance Objectives in a Telephone Communication System, A. MacAdam. (Digest of 58-59) 307
Bay Shore Generating Station, Electrical Features of. May, Gardam. (Digest of 58-512) 786
Bearings, Evolution of the Design and Operation of Large Thrust. Baudry. (Digest of 58-171) 801
Billet Heating, Classical Heat Flow Problems Applied to Induction. Baker. (Digest of 58-202) 909
Black, Harold S.—1957 Lamme Medalist 720-3
Board of Directors, Summary of the Report of the 740-3
Boiling Water Reactor, Instrumentation for a. Kornblith 696-8
Bonneville System, The Application of Supervisory Control on the. Boston, Shank. (Digest of 58-1029) 1114
Breaker Restriking and Arrester Reaction on the Pennsylvania Power and Light Company 220-Kv System. Galiyano, MacArthur, Mackenzie. (58-94) 308-11
Breakers, Leakage-Flux Suppression in Magnetic Air. Strom. (Digest of 58-21) 317
Bridges, Cable Installations on. Scheirer, Winitsky. (Digest of 58-17) 224
Britain, Technical Education in. Akhurst 547-50
Broadband Microwave Antenna System, A New. Friis, May. (58-185) 502-06
Builders of Engineers' Council for Professional Development, The. Davies 50-2
Buildings, Electrical Service for Large. Hamilton 822-4
Bundle Conductors, Short-Circuit Tests on. Malmstrom, Gifford, Smith. (DP58-1000) 724-7
Bus and Switching Structure, 138-Kv Metal-Enclosed Isolated-Phase. Albright. (Digest of 58-127) 803
Bus Conductor, Silver Plated Aluminum. Burley. (Digest of 58-875) 892
Bus Distribution Substations, Double-. Spath, Oliver. (DP58-518) 1116-21

C

Cable Installations on Bridges. Scheirer, Winitsky. (Digest of 58-17) 224
Cable Telegraphy, An Improved Six-Channel Time Division Multiplex for Submarine. Wilder. (Digest of 58-44) 707
Cable to Oil-Filled Cable, 69-Kv Stop Joint for Connecting Pipe-Type. Bolling. (Digest of 58-73) 584
Cables and Methods Taken to Improve Them, Study of Return Losses on Loaded Trunk. Speake. (Digest of 58-214) 604
Cables, Corona-Level Scanning of High-Voltage Power. Gooding, Slade. (Digest of 57-752) 236
Cables, Surge Measurement Errors Introduced by Coaxial. Park. (Digest of 58-110) ..288
Cables, The Vancouver 230-Kv Oil-Filled. Wollaston, Horne. (58-785) 816-21
Capacitance by Conjoining Analytical and Analog Techniques, The Accurate Determination of. Horgan, Pesavento. (Digest of 58-63) 513
Capacity of ACSR, Current-Carrying. House, Tuttle. (Digest of 58-41) 719
Carrier Systems, Coupling Methods for Power Line. Jones, Waddington. (Digest of 57-1093) 64
Carrier Systems in Two-Way Closed-Circuit Educational TV, Remote Control. Martin, Warnick, Vandeland 804-06
Carrying Capacity of ACSR, Current-. House, Tuttle. (Digest of 58-41) 719
Cell Construction for Current-Limiting Reactors. Sauer. (Digest of 58-46) 413
Central Station Application, Large Gas Turbines for. Stys. (58-164) 238-42
Challenge to Engineering Initiative, Today's. Hodnette 682-5
Channels for SAGE Data Systems, Communication. James 792-7
Chemical Digester for the Paper Industry, Static Control for Wood Chip. Hess 1020-5
Choice, The Criterion of Economic. Jeynes, Van Nimwegen. (Digest of 58-115) ..695
Circuit, An Accurate Analog Frequency Measuring. Mitchell 912-14
Circuit Analysis, Component Current Method of. Su. 947-50
Circuit Breaker, Service Experience and Staged Field Tests on the 115-Kv, 1 Million Kva Gas-Filled Power, Henry, Friedrich, Reese. (Digest of 58-128) 695
Circuit Conventions and Concepts, Simplicity in 3-Phase System. Lewis:
Part I 957-9
Part II 1038-40
Part III 1126-8
Circuit Lines of the Commonwealth Edison Company, Analytical Studies of Lightning Performance of 138-Kv Double. Caswell, Gross, Koncel. (Digest of 58-14) 1007
Circuit Theory Approach to Finite Difference Stability, An Electric. Karplus. (Digest of 58-60) 622
Circuit Transmission Lines, Lightning Performance of 138-Kv Twin. Caswell, Koncel, Johnson, Schultz. (57-1084) 142-8
Circuits, A Method of Designing Transistor Switching. Burroughs 944-7
Circuits, Fuse-Monitoring Systems for Multiple Fuse. Lezan 154-7
Circuits, Minimization of Components in Electronic Switching. Beatson. (Digest of 58-5) 215
Class III-V Compound Rectifiers. Kich. (CP57-1046) 514-16
Classical Heat Flow Problems Applied to Induction Billet Heating. Baker. (Digest of 58-202) 909
Closed-Circuit Educational TV, Remote Control Carrier Systems in Two-Way. Martin, Warnick, Vandeland 804-06
Coatings, The Insulator Contamination Problem as Influenced by Silicone Surface. Conner, Lantz. (Digest of 58-22) 297
Coaxial Cables, Surge Measurement Errors Introduced by. Park. (Digest of 58-110) ..288
Combustion Control-Load Control Tie-In Equipment, Evaluation of. Travers, Zelenka, List, Nichols 915
(Committee Report) Standard Basic Impulse Insulation Levels 727-9
(Committee Report) Working Group Report on Mobile Substations. (Digest of 58-7) 141
(Committees) Engineering Progress—1957. .....1, 22-55
Committees for 1958-59, AIEE Officers, Departments and 870
Commonwealth Edison Company, Analytical Studies of Lightning Performance of 138-Kv Double Circuit Lines of the. Caswell, Gross, Koncel. (Digest of 58-14) 1007
(Commonwealth Edison Co.) Lightning Performance of 138-Kv Twin Circuit Transmission Lines. Caswell, Koncel, Johnson, Schultz. (57-1084) 142-8
Communication Channels for SAGE Data Systems. James 792-7
Communication Services, Radar Interference to Microwave. Campbell. (58-817) 916-21
(Communication Switching Systems) Nation-Wide Switching of Intertoll Trunks—Transmission Considerations. Wallman. (Digest of 58-5) 237
Communication System, A Basis for Transmission Performance Objectives in a Telephone. MacAdam. (Digest of 58-59) ..307
(Communication Systems) Study of Return Losses on Loaded Trunk Cables and Methods Taken to Improve Them. Speake. (Digest of 58-214) 604
(Communication Theory) Entering the Machine Domain. (CP58-36) 289-92
Component Current Method of Circuit Analysis. Su. 947-50
Components in Electronic Switching Circuits, Minimization of. Beatson. (Digest of 58-5) 215
Compound Rectifiers, Class III-V. Kich. (CP57-1046) 514-16
Computer, Operating Experience with West Penn's Economic Dispatch. Hamilton, Osterle. (Digest of 58-207) 908
Computer, Train Performance and Tonnage Ratings Calculated by Digital. Hogan. (58-190) 424-9

Computers for Distribution Systems, Digital. Reps 708-13
Computers into Control Systems, Fitting. Solecito 396-401
(Computing Devices) DDA—What Is It? Goldman 592-4
Conductor-Cooled Machines, Gas Flow and Heat Transfer in. Rosenberg. (Digest of 57-1006) 133
Conductor, Silver Plated Aluminum Bus. Burley. (Digest of 58-873) 892
Conductors, Field Strength Near Rectangular. Miller. (58-367) 814
Conductors, Short-Circuit Tests on Bundle. Malmstrom, Gifford, Smith. (DP58-508) 724-7
Considerations in a Nuclear Safety Instrumentation System, Design. Underkoffler, Olson 1008-13
Constant and Response Time of Thermal Converters, The Definition and Measurement of the Time. Hermach. (Digest of 58-11) 620
Constant Magnetic Fields, Iron Wire Exploration of Alternating or. Moore 1124-6
Contamination Problem as Influenced by Silicone Surface Coatings, The Insulator. Conner, Lantz. (Digest of 58-22) 297
Control-Load Control Tie-In Equipment, Evaluation of Combustion. Travers, Zelenka, List, Nichols 915
Control System, A General Purpose Selective Signaling and. Large, Mitchael 486-91
Control Systems, Fitting Computers into. Solecito 396-401
Conventions and Concepts, Simplicity in 3-Phase System Circuit. Lewis:
Part I 957-9
Part II 1038-40
Part III 1126-8
Converters, The Definition and Measurement of the Time Constant and Response Time of Thermal. Hermach. (Digest of 58-11) 620
Cooled Machines, Gas Flow and Heat Transfer in Conductor-. Rosenberg. (Digest of 57-1006) 133
Cooling of Livestock in Hot Climates, Artificial. Kelly, Bond, Ittner. (Digest of 58-1107) 1102
Copper Losses in Transformers, Measurement of Iron and. Specht, Rademacher, Moore. (Digest of 58-158) 402
Core Event Counter for Earth Satellite Memory, Magnetic. Schaefer 52-6
Corona-Level Scanning of High-Voltage Power Cables. Gooding, Slade. (Digest of 57-732) 236
Count-Rate Systems, Transistor. Weisner .623-5
Counter for Earth Satellite Memory, Magnetic Core Event. Schaefer 52-6
Coupled and Uncoupled Turbine, Friction and Windage Loss Tests of McNary Generators with. Cox, Krahn. (Digest of 57-939) 813
Coupling Methods for Power Line Carrier Systems. Jones, Waddington. (Digest of 57-1095) 64
Coverage, Systems Approach to Determination of Television. Bowie 129-32
Criteria, Selection and Use of Servo Performance. Schultz, Rideout. (Digest of 57-1035) 247
Criterion of Economic Choice, The. Jeynes, Van Nimwegen. (Digest of 58-113) 626
Current Balancing Reactors for Semiconductor Rectifiers. Dortort. (Digest of 58-219) 589
Current-Carrying Capacity of ACSR. House, Tuttle. (Digest of 58-41) 719
Current Cutoff and Arc Voltage on Recovery Voltage, Effect of. Concordia. (Digest of 58-111) 791
Current Limiting Reactors. Cell Construction for. Sauer. (Digest of 58-46) 413
Current Method of Circuit Analysis, Component. Su 947-50
Curricula, ECPD Accreditation of Engineering. Chambers, Branigan 686-8
Cutoff and Arc Voltage on Recovery Voltage, Effect of Current. Concordia. (Digest of 58-111) 791
Cycles, Thermal Analysis of Transformer Load. Bennon. (Digest of 58-55) 493

D

Data Systems, Communication Channels for SAGE. James 792-7
Data Transmission Testing Set. Boughtwood, Christie. (58-172) 232-5
DDA—What Is It? Goldman 592-4
Definition and Measurement of the Time Constant and Response Time of Thermal Converters, The. Hermach. (Digest of 58-11) 620
Delete John Wood. Chipman 694-5
Demand for and Supply of Engineers and Scientists. The. Cavanaugh 590-1
Demand Meter, New Printing. Terry. (Digest of 58-146) 485
Demands of an Explosive Era. Linder ..674-80
Demonstrator, A Watt-Hour Meter. Moore 933-7
Departments and Committees for 1958-59, AIEE Officers 870
Design and Operation of Large Thrust Bearings, Evolution of the. Baudry. (Digest of 58-171) 801
Design Considerations in a Nuclear Safety Instrumentation System. Underkoffler, Olson 1008-13
Design Engineers, A Reliability Handbook for. Dreste 508-12
Design of Function Generators Using Short Time Memory Devices and Nonlinear Elements, The. Revay, Ford. (Digest of 58-247) 927
Design of Oil-Cooled Rotating Machinery, Progress in Thermal. Richards. (58-790) 808-12
Design Theory for Sampled-Data Feedback Control System, Statistical. Chang. (57-1061; 58-90) 602-03
Designing Transistor Switching Circuits, A Method of. Burroughs 944-7
Destruction on the Pennsylvania Power and Light 220-Kv System, Breaker Restriking and Arrester. Galiyano, MacArthur, Mackenzie. (58-94) 308
Determination of Capacitance by Conjoining Analytical and Analog Techniques, The Accurate. Horgan, Pesavento. (Digest of 58-63) 513
Determination of Optimum Transmission Voltage. Camburn, Stafford 700-03
Determination of Reserve and Interconnection Requirements. Limmer. (Digest of 58-139) 595
Determination of Television Coverage, Systems Approach to. Bowie 129-32
Developments, Engineering—1957 2-21
Developments in Light Sources and Optical Systems for Roadway Lighting, New. Karns 903-07
Devices and Nonlinear Elements, The Design of Function Generators Using Short Time Memory. Revay, Ford. (Digest of 58-247) 927
Dielectric Strength and Voltage Life of Polyethylene. Hunt, Koulopoulos, Ware. (Digest of 58-51) 681
Dielectric Strength of Oil. The Effect of Transformer Oil Preservation Methods on the. Kaufman, Pierce, Uhlig. (Digest of 57-1039) 65
(Dielectrics) Electrical Insulation Properties at Ultrahigh Temperatures. Duncan, Felger. (58-115) 318-22
(Dielectrics) Insulation Aging in Pure Oxygen and in a Vacuum. Whitman. (Digest of 58-119) 781
(Dielectrics) Internal Oxidation Mechanism for Nontracking Organic Insulations. Norman, Kessel. (Digest of 58-211) 699
(Dielectrics) Treeing Effects in Polyethylene. Kitchin, Pratt. (58-121) 218-23
Difference Stability, An Electric Circuit Theory Approach to Finite. Karplus. (Digest of 58-60) 622
Digester for the Paper Industry, Static Control for Wood Chip Chemical. Hess .1020-5
Digital and Pictorial Photographic Electronic Recorder, A. McPherson, Sonderby. (58-29) 616-19
Digital Computer, Train Performance and Tonnage Ratings Calculated by. Hogan. (58-190) 424-9
Digital Computers for Distribution Systems. Reps 708-13
Digital Indicator with ELPAK Translation Logic, An Electroluminescent. Sack. (Digest of 58-150) 517
Dimensions for a Unified Theory of Electromechanics. Allen 134-40
Letter 665
Diode Reactance Modulator, The. Montgomery. (Digest of 57-1028) 613
Dispatch Computer, Operating Experience with West Penn's Economic. Hamilton, Osterle. (Digest of 58-207) 908
Displacement Angle on Synchronous Machines, Measurement of Rotor. Klnitsky. (Digest of 58-198) 1019
Distribution Feeders, A Protection Plan for. Hayden, Martin, Tilson. (Digest of 58-174) 1000
Distribution Substations, Double-Bus. Spath, Oliver. (DP58-518) 1116-21
Distribution Systems, Digital Computers for. Reps 708-13
Domain, Entering the Machine. Seaton. (CP58-36) 289-92
Letter 572
Domestic Appliances, Noise Control of. Plunkett 1106-08
Double-Bus Distribution Substations. Spath, Oliver. (DP58-518) 1116-21
Double Circuit Lines of the Commonwealth Edison Company, Analytical Studies of Lightning Performance of 138-Kv. Caswell, Gross, Koncel. (Digest of 58-14) 1007
Drives for Modern Textile Machines, A-C Group. Helmick 498-500

E

Earth Satellite Memory, Magnetic Core Event Counter for. Schaefer 52-6
ECPD Accreditation of Engineering Curricula. Chambers, Branigan 686-8
(ECPD) Your Next Step Registration. Paige 491-2
Economic Aspects of the Residential Heat Pump on Electric Utility Systems, Load and. Bary. (Digest of 57-12) 57
Economic Choice, The Criterion of. Jeynes, Van Nimwegen. (Digest of 58-113) 626
Economic Dispatch Computer, Operating Experience with West Penn's. Hamilton, Osterle. (Digest of 58-207) 908
Edison Medalist for 1957, John K. Hodnette 214-17
Educating Electrical Engineers, Industry Viewpoints on. Hill 544-6
(Education) A Watt-Hour Meter Demonstrator. Moore 933-7
Education and Research in India, Technical. Malti 539-43
Education and Research in the USSR, Electrical Engineering. Abetti, Lincks:
Part I. Education 584-90
Part II. Research 479-84
Letter 867
Education and the Science Frontiers. Watson 523-5
(Education) ECPD Accreditation of Engineering Curricula. Chambers, Branigan .686-8
Education for the Future, Electrical Engineering. Honnell 940-3
Education in Britain, Technical. Akhurst 547-50
Education, India's Engineering. Atkinson .325-7
(Education) Simplicity in 3-Phase System Circuit Conventions and Concepts. Lewis:
Part I 957-9
Part II 1038-40
Part III 1126-8
Education Yesterday, Today, and Tomorrow. Engineering. Creamer 929-32
Educational Problems, Technical Manpower Issues and Related. Meyerhoff, Arnold 248-9
Educational TV, Remote Control Carrier Systems; in Two-Way Closed-Circuit. Martin, Warnick, Vandeland 304-06
Effect of Current Cutoff and Arc Voltage on Recovery Voltage. Concordia. (Digest of 58-111) 791
EHV, Project. Abetti 669-74
Electric Circuit Theory Approach to Finite Difference Stability, An. Karplus. (Digest of 58-60) 622
Electric Power for Future Flight Vehicles. Demler 997-9
Electric Systems, Metallic Rectifiers for Shipboard. Straub, Wiest. (58-135) 312-16
Electric Utility Systems, Load and Economic Aspects of the Residential Heat Pump on Bary. (Digest of 57-12) 57
Electrical Engineer in the Petroleum Industry, The. Crothers 45-8
Electrical Engineering Education and Research in the USSR. Abetti, Lincks:
Part I. Education 584-90
Part II. Research 479-84
Letter 869, 994
Electrical Engineering Education for the Future. Honnell 940-3
Electrical Engineers, Industry Viewpoints on Educating. Hill 544-6
Electrical Engineer's World—1957, An. Ingram 181-4
Electrical Features of Bay Shore Generating Station. May, Gardham. Digest of 58-512) 786

Electrical Frontiers in Space. Fanuel. ..893-7
Electrical Industry in Mexico, The. Gelbke 595-6
Electrical Insulation Properties at Ultrahigh Temperatures. Duncan, Felger. (58-115) 318-22
Electrical Insulation, Role of AIEE in. Berberich 1099-1101
Electrical Insulation, The Institute and. Hickernell 1097-9
Electrical Layout for a Textile Mill, An Ideal. Gelders 404-07
Electrical Requirements for A-C Mining, National and State. Brown 910-12
Electrical Service for Large Buildings. Hamilton 822-4
Electrical Systems, Overcurrent Protection in Large Capacity Shipboard. Cole. (Digest of 58-132) 293
Electricity in the Petroleum Industry, Static. Howard 610-14
Electricity in the Tennessee Valley, House Heating with. Martin 922-6
Electrification, The Financial Return on Railway. Brown, Marmaros. (58-32) ..244-6
Electrification, Trends in Railway. Ross 797-800
Electroluminescent Digital Indicator with ELPAK Translation Logic, An. Sack. (Digest of 58-150) 517
Electromechanics, Dimensions for a Unified Theory of. Allen 134-40
Letter 665
Electron Tube Evaluation for Guided Missile Applications. Chandler 690-2
Electronic Recorder, A Digital and Pictorial Photographic. McPherson, Sonderby. (58-29) 616-19
Electronic Switching Circuits, Minimization of Components in. Beatson. (Digest of 58-3) 213
Electronic Transformers, An Experimental Study of Magnetic Materials in Ultrahigh Temperature. Harms. (58-209) 408-12
(Electronics) The Diode Reactance Modulator. Montgomery. (Digest of 57-1028) 613
ELPAK Translation Logic, An Electroluminescent Digital Indicator with. Sack. (Digest of 58-150) 517
Engineer in Industrial Management, The Place of the. Ernst, Miller 203-07
Engineering Curricula, ECPD Accreditation of. Chambers, Branigan 686-8
Engineering Developments—1957 2-21
Engineering Education, India's. Atkinson .325-7
Engineering Education Yesterday, Today, and Tomorrow. Creamer 929-32
Engineering Foundation—Its Aims and Activities, The. Green 390-2
Engineering, Human Factors in. Kilgore, Baker 586-8
Engineering Initiative, Today's Challenge to. Hodnette 682-5
Engineering Leadership, Motivation and Human Factors in. Kilgore. (58-572) ..1015-18
(Engineering Profession) The Functional Plan. Barrett 119-21
Engineering Progress—1957 Committees 1, 22-35
Engineering Reliability, Philosophy of. Miller: Part I 579-83
Part II 714-18
Engineers, A Reliability Handbook for Design. Dreste 508-12
Engineers and Scientists, The Demand for and Supply of. Cavanaugh 590-1
Engineers' Council for Professional Development, The Builders of. Davies 50-2
Engineers, The Growing Importance of Ethics to. Alger 42-5
Engineers to Magnetic Amplifier Problems. Introducing Young. Finzi 1035-8
Entering the Machine Domain. Seaton. (CP58-56) 289-92
Letter 572
Environment, Science and Technology in a Changing. Engstrom 283-7
Equipment, Evaluation of Combustion Control-Load Control Tie-In. Travers, Zelenka, List, Nichols 915
Equipment, Performance of UHF and VHF Transmitting and Receiving. Morlock, Swinyard 226-31
Equipment Ventilating Systems, Railway Traction. Widell. (Digest of 58-507) 585
Era, Demands of an Explosive. Linder ..674-80
Errors Introduced by Coaxial Cables, Surge Measurement. Park. (Digest of 58-110) .288
(Eta Kappa Nu) Science and Technology in a Changing Environment. Engstrom ..283-7
Ethics to Engineers, The Growing Importance of. Alger 42-5
Evaluation of Combustion Control-Load Control Tie-In Equipment. Travers, Zelenka, List, Nichols 915
Evaluation of Wiring Systems for the Pulp and Paper Industry. Steedley 1110-13
Evolution of the Design and Operation of Large Thrust Bearings. Baudry. (Digest of 58-171) 801
Experimental Study of Magnetic Materials in Ultrahigh Temperature Electronic Transformers, An. Harms. (58-209) 408-12
Explosive Era, Demands of an. Linder ..674-80
Extended Switching Criterion for Second Order Saturated Servomechanisms. Diesel. (Digest of 57-1036) 49
(Extra High Voltage) Project EHV. Abetti 669-74

F

Factors in Engineering, Human. Kilgore, Baker 586-8
Factors in Engineering Leadership, Motivation and Human. Kilgore. (58-572) .1015-18
Faults on High-Voltage Transmission Lines, Relaying Tapped Substations for World, Rose, Skuderna. (Digest of 58-25) ..621
(Feedback Control) An Analysis of a Servomechanism with Backlash by the Ritz-Galerkin Method. Ogata, Atkinson. (Digest of 58-86) 1026
(Feedback Control) Fitting Computers into Control Systems. Sollecito 396-401
(Feedback Control) Limited Values of Driving Point Impedances and Transfer Functions. Jones. (Digest of 58-81) 403
(Feedback Control) Selection and Use of Servo Performance Criteria. Schultz, Rideout. (Digest of 57-1033) 247
Feedback Control Systems Progress, Objectives and Trends in. Chestnut 58-63
Feedback Control Systems, Statistical Design Theory for Sampled-Data. Chang. (57-1061; 58-90) 602-03
(Feedback Control) Use of Phase Space in Transient Stability Studies. Bow, Van Ness. (Digest of 58-83) 601
Feeders, A Protection Plan for Distribution. Hayden, Martin, Tilson. (Digest of 58-174) 1000
Field Investigation on the OVEC 345-Kv System, 1956 Lightning. Schlomann, Johnson. Price, Anderson 208-12
Field Strength, Measurement of Television. Head 298-302
Field Strength Near Rectangular Conductors. Miller. (58-367) 814
Field Tests on the 115-Kv, 1 Million Kva Gas-Filled Power Circuit Breaker, Service Experience and Staged. Henry, Friedrich, Reese. (Digest of 58-128) 693
Financial Return on Railway Electrification, The. Brown, Marmaros. (58-32) 244-6
Finite Difference Stability, An Electric Circuit Theory Approach to. Karplus. (Digest of 58-60) 622
Fitting Computers into Control Systems. Sollecito 396-401
(500-Kw) Electrical Service for Large Buildings. Hamilton 822-4
Flight Vehicles, Electric Power for Future. Demler 997-9
Flux Generator, Synchronous-. Smith ..605-10
Flux Suppression in Magnetic Air Breakers, Leakage-. Strom. (Digest of 58-21) ..517
Foundation—Its Aims and Activities, The Engineering. Green 390-2
Frequency Measuring Circuit, An Accurate Analog. Mitchell 912-14
Frequency Response Characteristics of a Nonlinear Servomechanism from an Amplitude and Frequency Sensitive Describing Function, Obtaining the. Stein, Thaler. (Digest of 58-84) 689
Friction and Windage Loss Tests of McNary Generators with Coupled and Uncoupled Turbine. Cox, Krahn. (Digest of 57-939) 813
Frontiers, Education and the Science. Watson 323-5
Function Generators Using Short Time Memory Devices and Nonlinear Elements, The Design of. Revay, Ford. (Digest of 58-247) 927
Functional Plan, The. Barrett 119-21
Functions, Limited Values of Driving Point Impedances and Transfer. Jones. (Digest of 58-81) 403
Fundamentals of Infrared. Juzycz 704-06
Fuse-Monitoring System for Multiple Fuse Circuits. Lezan 154-7
Future, Electrical Engineering Education for the. Honnell 940-3

G

Gaging Plating Thickness, A System for. Myers, Waidelich. (Digest of 58-933) ..815
Gas-Filled Power Circuit Breaker, Service Experience and Staged Field Tests on the 115-Kv, 1 Million Kva. Henry, Friedrich, Reese. (Digest of 58-128) 693
Gas Flow and Heat Transfer in Conductor-Cooled Machines. Rosenberg. (Digest of 57-1006) 133
Gas Turbine Pumping Units of Trans-Arabian Pipe Line Company, Intermediate. Nibley, Hillman. 158-62
Gas Turbines for Central Station Application, Large. Stys. (58-164) 238-42
General Purpose Selective Signaling and Control System, A. Large, Michael. ...486-91
Generating Station, Electrical Features of Bay Shore. May, Gardam. (Digest of 58-512) 786
Generator, Synchronous-Flux. Smith ...605-10
Generators Using Short Time Memory Devices and Nonlinear Elements, The Design of Function. Revay, Ford. (Digest of 58-247) 927
Generators with Coupled and Uncoupled Turbine, Friction and Windage Loss Tests of McNary. Cox, Krahn. (Digest of 57-939) 813
Graduate Honors Programs with Industry in E. E. at the University of Pittsburgh. Calvert 1041-4
Group Drives for Modern Textile Machines, A-C. Helmick 498-500
Growing Importance of Ethics to Engineers, The. Alger 42-5
Guided Missile Applications, Electron Tube Evaluation for. Chandler 690-2

H

Handbook for Design Engineers, A Reliability. Dreste 508-12
Harold S. Black—1957 Lamme Medalist ..720-5
Heat Flow Problems Applied to Induction Billet Heating, Classical. Baker. (Digest of 58-202) 909
Heat Pump on Electric Utility Systems, Load and Economic Aspects of the Residential. Bary. (Digest of 57-12) 57
Heat Pumping, Thermoelectric. Lindenblad 802-06
Heat Transfer in Conductor-Cooled Machines, Gas Flow and. Rosenberg. (Digest of 57-1006) 133
Heating with Electricity in the Tennessee Valley, House. Martin 922-6
High-Voltage Power Cables, Corona-Level Scanning of. Gooding, Slade. (Digest of 57-732) 236
(High Voltage) Project EHV. Abetti ..669-74
High-Voltage Transmission Lines, Relaying Tapped Substations for Faults on. World, Rose, Skuderna. (Digest of 58-25) ..621
(History) Delete John Wood. Chipman ..694-5
(History) The Institute's 75th Anniversary Celebration. Hickernell 889-91
Hodnette, John K.—1957 Edison Medalist 214-17
(Holophane Co.) Fundamental Aspects of Lighting. Logan 36-41
Honorary Member Presentation, Donald A. Quarles— 787-90
Honors Programs with Industry in E.E. at the University of Pittsburgh, Graduate. Calvert 1041-4
House Heating with Electricity in the Tennessee Valley. Martin 922-6
Human Factors in Engineering, Kilgore, Baker 586-8
Human Factors in Engineering Leadership, Motivation and. Kilgore. (58-572) 1015-18
(Hydroelectric) Power for Mysore. Naravana Rao, Sitaram, Sreedharan. 1103-05

I

Ideal Electrical Layout for a Textile Mill, An. Gelders 404-07
Impedance and Return Loss Performance of Telephone Plant in Metropolitan Area. Bogan. (Digest of 58-4) 225
Impedances and Transfer Functions, Limited Values of Driving Point. Jones. (Digest of 58-81) 403
Impulse Insulation Levels, Standard Basic. (Committee Report) 727-9

Impulses System for Arc Recovery Strength Measurements. Cobine, Burger, Farrall. (Digest of 58-902) 807
Impulses Waves with an Isolated Screen Room Installation, Measurements of Steep-Front. Miller, Wittibschlager. (Digest of 58-18) 507
India, Technical Education and Research in. Malti 539-43
India's Engineering Education. Atkinson .325-7
Indicator with ELPAK Translation Logic, An Electroluminescent Digital. Sack. (Digest of 58-150) 517
Induction Billet Heating, Classical Heat Flow Problems Applied to. Baker. (Digest of 58-202) 909
Industrial Management, The Place of the Engineer in. Ernst, Miller 203-07
Industry in E.E. at the University of Pittsburgh, Graduate Honors Programs with. Calvert 1041-4
Industry in Mexico, The Electrical. Gelbke 595-6
Industry, Static Electricity in the Petroleum. Howard 610-14
Industry Viewpoints on Educating Electrical Engineers. Hill 544-6
Information Retrieval, Presently Available Tools for. Rabinow 494-8
Infrared, Fundamentals of. Juzycz 704-06
Initiative, Today's Challenge to Engineering. Hodnette 682-5
Installations on Bridges, Cable. Scheirer, Winitsky. (Digest of 58-17) 224
Institute and Electrical Insulation, The. Hickernell 1097-9
Institute's 75th Anniversary Celebration, The. Hickernell 889-91
Instrumentation for a Boiling Water Reactor. Kornblith 696-8
Instrumentation System, Design Considerations in a Nuclear Safety. Underkoffler, Olson 1008-13
(Insulated Conductors) Cable Installations on Bridges. Scheirer, Winitsky. (Digest of 58-17) 224
(Insulated Conductors) Corona-Level Scanning of High-Voltage Power Cables. Gooding, Slade. (Digest of 57-732) 256
(Insulated Conductors) Dielectric Strength and Voltage Life of Polyethylene. Hunt, Koulopoulos, Ware. (Digest of 58-51) 681
(Insulated Conductors) 69-Kv Stop Joint for Connecting Pipe-Type Cable to Oil-Filled Cable. Bolling. (Digest of 58-73) 584
Insulation Aging in Pure Oxygen and in a Vacuum. Whitman. (Digest of 58-119) 781
Insulation Levels, Standard Basic Impulse. (Committee Report) 727-9
Insulation Properties at Ultrahigh Temperatures, Electrical. Duncan, Felger. (58-115) 318-22
Insulation, Role of AIEE in Electrical. Berberich 1099-1101
Insulation, The Institute and Electrical. Hickernell 1097-9
(Insulation) Treeing Effects in Polyethylene. Kitchin, Pratt. (58-121) 218-23
Insulations Internal Oxidation Mechanism for Nontracking Organic. Norman, Kessel. (Digest of 58-211) 699
Insulator Contamination Problem as Influenced by Silicone Surface Coatings, The. Conner, Lantz. (Digest of 58-22) 297
Interconnection Requirements, Determination of Reserve and. Limmer. (Digest of 58-139) 393
Interference to Microwave Communication Services, Radar. Campbell. (58-817) .916-21
Intermediate Gas Turbine Pumping Units of Trans-Arabian Pipe Line Company. Nibley, Hillman 158-62
Internal Oxidation Mechanism for Non-Tracking Organic Insulations. Norman, Kessel. (Digest of 58-211) 699
Intertoll Trunks—Transmission Considerations Nation-Wide Switching of. Wallman. (Digest of 58-5) 237
Introducing Young Engineers to Magnetic Amplifier Problems. Finzi 1035-8
Investigation on the OVEC 345-Kv System, 1956 Lightning Field. Schlomann, Johnson, Price, Anderson 208-12
Iron and Copper Losses in Transformers, Measurement of. Specht, Rademacher, Moore. (Digest of 58-158) 402
Iron Wire Exploration of Alternating or Constant Magnetic Fields. Moore ..1124-6
Isolated-Phase Bus and Switching Structure, 138-Kv Metal-Enclosed. Albright. (Digest of 58-127) 303

J

John Wood, Delete. Chipman 694-5
Joint for Connecting Pipe-Type Cable to Oil-Filled Cable, 69-Kv Stop. Bolling. (Digest of 58-73) 584
Junctions, Temperature Rise of Solid. Diebold. (Digest of 57-144) 165

K

(Killian, J. R., Letter to) Technical Manpower Issues and Related Educational Problems. Meyerhoff, Arnold 248-9
Knowledge Plus Wisdom. Weber 575-9

L

Laboratories, Managing Research. Linville. (CP58-1031) 1001-06
Lamme Medalist for 1957—Harold S. Black 720-3
(Land Transportation) Railway Traction Equipment Ventilating Systems. Widell. (Digest of 58-507) 585
(Land Transportation) The Financial Return on Railway Electrification. Brown, Marmaros. (58-32) 244-6
(Land Transportation) Train Performance and Tonnage Ratings Calculated by Digital Computer. Hogan. (58-190) 434-9
(Land Transportation) Trends in Railway Electrification. Ross 797-800
Large Gas Turbines for Central Station Application. Stys. (58-164) 238-42
Layout for a Textile Mill, An Ideal Electrical. Gelders 404-07
Leadership, Motivation and Human Factors in Engineering. Kilgore. (58-572) ..1015-18
Leakage-Flux Suppression in Magnetic Air Breakers. Strom. (Digest of 58-21) ..317

Letters to Editor

Atomic Nucleus. Miller 994
Atomic Nucleus. Mommo 1159
Britain?
Denholm 773
Akhurst 774
Calder Hall. Veysey 116
Deduction Correct. Seaton 572
Engineer Registration. Klass 773
Grounding Electric Appliances. Hill ..280
Low-Sound Enclosures. Norris 379
Orderly Creative Inventing. Allen 379
Prefabricated Substation, Earlier. Zimmerman 867
Profesional Recognition. Dodge 1160
Pump-Turbine Story. Jaski 867
Registration Prestige. Smith 1074
Soviet Co-operation. (Truxal) 476
Strato-Lab Research Aims. Freeman ..1160
Technical and Scientific Center. McPherson 476
Tesla Homeland Visited. Sweezy 116
Unified Dimensions Theory. Ralls:
Kinitsky 665
Ralls 666
Unified-Theory Dimensions. Homan 380
USSR EE Education and Research:
DeWitt 867
Abetti and Lincks 994
Women Engineers. Mann 279

Life of Polyethylene, Dielectric Strength and Voltage. Hunt, Koulopoulos, Ware. (Digest of 58-51) 681
Light Sources and Optical Systems for Roadway Lighting, New Developments in. Karns 905-07
Lighting, Fundamental Aspects of. Logan 36-41
Lighting Systems on Aircraft Carriers, Special Power and. Cole, Garbacz. (Digest of 58-567) 1014
Lightning Field Investigation on the OVEC 345-Kv System, 1956. Schlomann, Johnson, Price, Anderson 208-12
Lightning Performance of 138-Kv Double Circuit Lines of the Commonwealth Edison Company, Analytical Studies of. Caswell, Gross, Koncel. (Digest of 58-14) 1007
Lightning Performance of 138-Kv Twin Circuit Transmission Lines. Caswell, Koncel, Johnson, Schultz. (57-1084) 142-8
Lightning Stroke, The. Wagner, Hileman. (Digest of 58-24) 149
Limited Values of Driving Point Impedances and Transfer Functions. Jones. (Digest of 58-81) 405
Limiting Reactors, Cell Construction for Current. Sauer. (Digest of 58-46) 413
Livestock in Hot Climates, Artificial Cooling of. Kelly, Bond, Ittner. (Digest of 58-1107) 1102
Load Control Tie-In Equipment, Evaluation of Combustion Control. Travers, Zelenka, List, Nichols 915
Load Cycles, Thermal Analysis of Transformer. Bennon. (Digest of 58-55) 493
Loaded Trunk Cables and Methods Taken to Improve Them, Study of Return Losses on. Speake. (Digest of 58-214) 604
Loading of Turbines, Valve Point. Decker, Brooks. (Digest of 58-166) 501
Loads, Application of Vacuum Switches to Utility. Rittenhouse 414-17
Logic, An Electroluminescent Digital Indicator with ELPAK Translation. Sack. (Digest of 58-150) 517
Loss Performance of Telephone Plant in Metropolitan Area. Impedance and Return. Bogan. (Digest of 58-4) 225
Loss Tests of McNary Generators with Coupled and Uncoupled Turbine, Friction and Windage. Cox, Krahn. (Digest of 57-959) 813
Losses in Transformers, Measurement of Iron and Copper. Specht, Rademacher, Moore. (Digest of 58-158) 402
Losses on Loaded Trunk Cables and Methods Taken to Improve Them, Study of Return. Speake. (Digest of 58-214) 604

M

Machine Domain, Entering the. Seaton. (CP58-36) 289-92
Letter 572
Machines, A-C Group Drives for Modern Textile. Helmick 498-500
Machines, Gas Flow and Heat Transfer in Conductor-Cooled. Rosenberg. (Digest of 57-1006) 135
Machines, Measurement of Rotor Displacement Angle on Synchronous. Kinitsky. (Digest of 58-198) 1019
Magnetic Air Breakers, Leakage-Flux Suppression in. Strom. (Digest of 58-21) ...317
Magnetic Amplifier Design. Anderson:
Part I. The Core. (Digest of 57-922) ..394
Part II. The Windings. (Digest of 58-39) 395
Magnetic Amplifier Problems, Introducing Young Engineers to. Finzi 1035-8
Magnetic Core Event Counter for Earth Satellite Memory. Schaefer 52-6
Magnetic Fields, Iron Wire Exploration of Alternating or Constant. Moore ..1124-6
Magnetic Materials in Ultrahigh Temperature Electronic Transformers, An Experimental Study of. Harms. (58-209) .408-12
(Management) Human Factors in Engineering. Kilgore, Baker. 586-8
Management, The Place of the Engineer in Industrial. Ernst, Miller 203-07
Managing Research Laboratories. Linville. (CP58-1031) 1001-6
Managing Versus Manipulation. Race .897-902
Manpower Issues and Related Educational Problems, Technical. Meyerhoff, Arnold 248-9
(Manpower) The Demand for and Supply of Engineers and Scientists. Cavanaugh .590-1
(Marine Transportation) Metallic Rectifiers for Shipboard Electric Systems. Straub, Wiest. (58-135) 312-16
(Marine Transportation) Overcurrent Protection in Large Capacity Shipboard Electrical Systems. Cole. (Digest of 58-132) ..293
(Marine Transportation) Special Power and Lighting Systems on Aircraft Carriers. Cole, Garbacz. (Digest of 58-567) 1014
Materials in Ultrahigh Temperature Electronic Transformers, An Experimental Study of Magnetic. Harms. (58-209) .408-12
McNary Generators with Coupled and Uncoupled Turbine, Friction and Windage Loss Tests of. Cox, Krahn. (Digest of 57-959) 813
Measurement and the Race for Technological Supremacy, Precise. Astin 294-6
Measurement Errors Introduced by Coaxial Cables, Surge. Park. (Digest of 58-110) 288
Measurement of Iron and Copper Losses in Transformers. Specht, Rademacher, Moore. (Digest of 58-158) 402

Measurement of Rotor Displacement Angle on Synchronous Machines. Kinitsky. (Digest of 58-198) 1019
Measurement of Television Field Strength. Head 298-302
Measurement of the Time Constant and Response Time of Thermal Converters, The Definition and. Hermach. (Digest of 58-11) 620
Measurements, Impulse System for Arc Recovery Strength. Cobine, Barger, Farrall. (Digest of 58-902) 807
Measurements of Steep-Front Impulse Waves with an Isolated Screen Room Installation. Miller, Wittibschlager. (Digest of 58-18) 507
Measuring Circuit, An Accurate Analog Frequency. Mitchell 912-14
Mechanism for Nontracking Organic Insulations, Internal Oxidation. Norman, Kessel. (Digest of 58-211) 699
Medalist, 1957 Edison—John K. Hodnette 214-17
Medalist, 1957 Lamme—Harold S. Black 720-3
Memory Devices and Nonlinear Elements, The Design of Function Generators Using Short Time. Revay, Ford. (Digest of 58-247) 927
Memory, Magnetic Core Event Counter for Earth Satellite. Schaefer 52-6
Message from the President. Barrett 383
Metal-Enclosed Isolated-Phase Bus and Switching Structure, 138-Kv. Albright. (Digest of 58-127) 303
Metallic Rectifiers for Shipboard Electric Systems. Straub, Wiest. (58-135) 812-16
Meter Demonstrator, A Watt-Hour. Moore 933-7
Meter, New Printing Demand. Terry. (Digest of 58-146) 485
Method of Circuit Analysis, Component Current. Su 947-50
Method of Designing Transistor Switching Circuits, A. Burroughs 944-7
Methods for Power Line Carrier Systems, Coupling. Jones, Waddington. (Digest of 57-1093) 64
Methods on the Dielectric Strength of Oil, The Effect of Transformer Oil Preservation. Kaufman, Pierce, Uhlig. (Digest of 57-1039) 65
Metropolitan Area, Impedance and Return Loss Performance of Telephone Plant in. Bogan. (Digest of 58-4) 225
Mexico, The Electrical Industry in. Gelbke 595-6
Microwave Antenna System, A New Broadband. Friis, May. (58-185) 502-06
Microwave Communication Services, Radar Interference to. Campbell. (58-817) 916-21
Mill, An Ideal Electrical Layout for a Textile. Gelders 404-07
Minimization of Components in Electronic Switching Circuits. Beatson. (Digest of 58-3) 213
Mining, National and State Electrical Requirements for A-C. Brown 910-12

Miscellaneous Short Items:

Aircraft Beacon Atop Industrial Site 999
("Astral") Vehicle for New Era Multiple Travel Needs 412
(Atomic) Full-Scale A-Power Station 148
Automatic Riveters 1013
Battery Vest 692
Brussels Fair, "Gas Light" for 625
Chemistry, Split Second 245
Circuit Breaker, 230-Kv 1018
Circuit Checker 685
Closed-Circuit Television in Steel Mill 1108
Cockpit Television Set 429
Computer for Flight Control 1113
(Cornelius Electric) Signs of the Times. (Photo) 63
Dual-Cooled Power Transformers 492
Electrode, World's Biggest 246
Electronic Typing Calculator 417
Elevator Test System 407
Freight Car, Nation's Largest 695
Furnaces, High-Vacuum 302
"Gas Light" for Brussels Fair 625
General Electric, 400-Mile Spinal Cord at 588
Huge Condensers Shipped via Great Lakes 824
Inert Gas Fusion Welder 698
Loudspeaker, 1,000-Watt 785
Low-Noise Amplifier Uses Semiconductor Diodes 812
Mine Detector, Sensitive 235
Mirrors Duplicate Sun's Heat 48
Missile Headache Cure 128
Missile Steering Control 1031
Missile Testing Inductance Coil 484
Mylar Rope 780
Navy Mobile Power Plant 207
Network Transformer Height Cut. 306
Power for Turnpike 1121
Project EHV Test Borings 1105
Sculptured Wing Skin 706
Series Capacitor Bank 512
Space Age Spawns New Technology 926
Space Sentry, U.S. Army's 619
Spectroscopic Plates Zero in Satellite Stations 506
Titan ICBM, Building the 511
Transformers, "Retired" 594
Transistorized Bombing and Navigation System 688
Transistorized Microphone 212

Missile Applications, Electron Tube Evaluation for Guided. Chandler 690-2
Missiles, Space Vehicles, Satellites, and.—A Symposium 1077-95
Mobile Substations, Working Group Report on. (Committee Report) (Digest of 58-7) 141
Modern Textile Machines, A-C Group Drives for. Helmick 498-500
Modulator, The Diode Reactance. Montgomery. (Digest of 57-1028) 613
Monitoring System for Multiple Fuse Circuits, Fuse-. Lezan 154-7
Motivation and Human Factors in Engineering Leadership. Kilgore. (58-572) 1015-18
Multiple Fuse Circuits, Fuse-Monitoring System for. Lezan 154-7
Multiplex for Submarine Cable Telegraphy, An Improved Six-Channel Time Division. Wilder. (Digest of 58-44) 707
Mysore, Power for. Narayana Rao, Sitaram. Sreedharan 1103-05

N

Nation-Wide Switching of Intertoll Trunks—Transmission Considerations. Wallman. (Digest of 58-5) 237
National and State Electrical Requirements for A-C Mining. Brown 910-12
National Science Foundation—Its Role in Electrical Engineering Research, ' The. Nordby, Faiman 782-5
(NSPE) ECPD Accreditation of Engineering Curricula. Chambers, Branigan 686-8
New Broadband Microwave Antenna System, A. Friis, May (58-185) 502-06
New developments in Light Sources and Optical Systems for Roadway Lighting. Karns 903-07
Noise Control of Domestic Appliances. Plunkett 1106-08
Nonlinear Servomechanism from an Amplitude and Frequency Sensitive Describing Function, Obtaining the Frequency Response Characteristics of a. Stein, Thaler. (Digest of 58-84) 689
Nontracking Organic Insulations, Internal Oxidation Mechanism for. Norman, Kesel. (Digest of 58-211) 699
Nuclear Power Plants, Training Operating Personnel for. McKeown 122-5
Nuclear Safety Instrumentation System, Design Considerations in a. Underkoffler, Olson 1008-13
(Nuclear) Transistor Count-Rate Systems. Weisner 623-5
(Nucleonic and Radiation) Instrumentation for a Boiling Water Reactor. Kornblith 696-8

O

Objectives and Trends in Feedback Control Systems Progress. Chestnut 58-65
Obtaining the Frequency Response Characteristics of a Nonlinear Servomechanism from an Amplitude and Frequency Sensitive Describing Function. Stein, Thaler. (Digest of 58-84) 689
Officers, Departments and Committees for 1958-59, AIEE 870
Oil-Cooled Rotating Machinery, Progress in Thermal Design of. Richards. (58-790) 808-12
Oil-Filled Cable, 60-Kv Stop Joint for Connecting Pipe-Type Cable to. Boiling. (Digest of 58-73) 584
Oil-Filled Cables, The Vancouver 230-Kv. Wollaston, Horne. (58-785) 816-21
Oil Preservation Methods on the Dielectric Strength of Oil, The Effect of Transformer. Kaufman, Pierce, Uhlig. (Digest of 57-1039) 65
115-Kv, 1 Million Kva Gas-Filled Power Circuit Breaker, Service Experience and Staged Field Tests on the. Henry, Friedrich, Reese. (Digest of 58-128) 693
138-Kv Double Circuit Lines of the Commonwealth Edison Company, Analytical Studies of Lightning Performance of. Caswell, Gross, Koncel. (Digest of 58-14) 1007
138-Kv Metal-Enclosed Isolated-Phase Bus and Switching Structure. Albright. (Digest of 58-127) 303
138-Kv Twin Circuit Transmission Lines, Lightning Performance of. Caswell Koncel, Johnson, Schultz, (57-1084) 142-8
1,000,000 Kva Gas-Filled Power Circuit Breaker, Service Experience and Staged Field Tests on the 115-Kv. Henry, Friedrich, Reese. (Digest of 58-128) 693
Operating Experience with West Penn's Economic Dispatch Computer. Hamilton, Osterle. (Digest of 58-207) 908
Operating Personnel for Nuclear Power Plants, Training. McKeown 122-5
Optical Systems for Roadway Lighting, New Developments in Light Sources and. Karns 903-07
Optimum Transmission Voltage, Determination of. Camburn, Stafford 700-03
Organic Insulations, Internal Oxidation Mechanism for Nontracking. Norman, Kessel. (Digest of 58-211) 699
(Organization) The Functional Plan. Barrett 119-21
Organization, The Television Allocations Study. Town 126-8
OVEC 345-Kv System, 1956 Lightning Field Investigation on the. Schlomann, Johnson, Price, Anderson 280-12
Overcurrent Protection in Large Capacity Shipboard Electrical Systems. Cole. (Digest of 58-132) 293
Oxidation Mechanism for Nontracking Organic Insulations, Internal. Norman, Kessel. (Digest of 58-211) 699
Oxygen and in a Vacuum, Insulation Aging in Pure. Whitman. (Digest of 58-119) 781

P

(Pacific Gas & Elec. Co.) Instrumentation for a Boiling Water Reactor. Kornblith 696-8
Paper Industry, Evaluation of Wiring Systems for the Pulp and. Steedley 1110-13
Paper Industry, Static Control for Wood Chip Chemical Digester for the. Hess 1020-5
Pennsylvania Power and Light Company 220-Kv System, Breaker Restriking and Arrester Destruction on the. Galiyano, MacArthur, Mackenzie. (58-94) 308-11
Performance and Tonnage Ratings Calculated by Digital Computer, Train. Hogan. (58-190) 424-9
Performance Criteria, Selection and Use of Servo. Schultz, Rideout. (Digest of 57-1033) 247
Performance Objectives in a Telephone Communication System, A Basis for Transmission. MacAdam. (Digest of 58-59) 307
Performance of 138-Kv Twin Circuit Transmission Lines, Lightning. Caswell, Koncel, Johnson, Schultz. (57-1084) 142-8
Performance of Telephone Plant in a Metropolitan Area, Impedance and Return Loss. Bogan. (Digest of 58-4) 225
Performance of UHF and VHF Transmitting and Receiving Equipment. Morlock, Swinyard 226-31
Personnel for Nuclear Power Plants, Training Operating. McKeown 122-5
Petroleum Industry, Static Electricity in the. Howard 610-14
Petroleum Industry, The Electrical Engineer in the. Crothers 45-8
Phase Space in Transient Stability Studies, Use of. Bow, Van Ness. (Digest of 58-85) 601
Philosophy of Engineering Reliability. Miller: Part I 579-83
Part II 714-18
Photographic Electronic Recorder, A Digital and Pictorial. McPherson, Sonderby. (58-29) 616-19

Pictorial Photographic Electronic Recorder, A Digital and. McPherson, Sonderby. (58-29) 616-19
Pipe-Type Cable to Oil-Filled Cable, 69-Kv Stop Joint for Connecting. Bolling. (Digest of 58-73) 584
Place of the Engineer in Industrial Management, The. Ernst, Miller 203-07
Plan 55-A, Automatic Telegraph Switching System. Vernam. (58-45) 418-23
Plan for Distribution Feeders, A Protection. Hayden, Martin, Tilson. (Digest of 58-174) 1000
Plan, The Functional. Barrett 119-21
Plants, Training Operating Personnel for Nuclear Power. McKeown 122-5
Plating Thickness, A System for Gaging Myers, Waidelich. (Digest of 58-933) 815
Polyethylene, Dielectric Strength and Voltage Life of. Hunt, Koulopoulos, Ware. (Digest of 58-51) 681
Polyethylene, Treeing Effects in. Kitchin, Pratt. (58-121) 218-23
Power and Lighting Systems on Aircraft Carriers, Special. Cole, Garbacz. (Digest of 58-567) 1014
Power Application Vacuum Switch, The. Sorensen 150-4
Power Cables, Corona-Level Scanning of High-Voltage. Gooding, Slade. (Digest of 57-732) 236
Power Circuit Breaker, Service Experience and Staged Field Tests on the 115-Kv 1 Million Kva Gas-Filled. Henry, Friedrich, Reese. (Digest of 58-128) 693
Power for Future Flight Vehicles, Electric. Demler 997-9
Power for Mysore. Narayana Rao, Sitaram, Sreedharan 1103-05
(Power Generation) Electrical Features of Bay Shore Generating Station. May, Gardam. (Digest of 58-512) 786
(Power Generation) Large Gas Turbines for Central Station Application. Stys. (58-164) 238-43
(Power Generation) The Electrical Industry in Mexico. Gelbke 595-6
(Power Generation) The Pump-Turbine Story. Jaski 598-600
(Power Generation) Valve Point Loading of Turbines. Decker, Brooks. (Digest of 58-166) 501
Power Line Carrier Systems, Coupling Methods for. Jones, Waddington. (Digest of 57-1093) 64
Power Plants, Training Operating Personnel for Nuclear. McKeown 122-5
Power Project. Electrical Features of the Upper Raquette River. Van Dyke. (Digest of 58-876) 1115
Precise Measurement and the Race for Technological Supremacy. Astin 294-6
Presently Available Tools for Information Retrieval. Rabinow 494-8
Preservation Methods on the Dielectric Strength of Oil, The Effect of Transformer Oil. Kaufman, Pierce, Uhlig. (Digest of 57-1099) 65
President, Message from the. Barrett 383
(Prices) Today's Challenge to Engineering Initiative. Hodnette 682-5
Printing Demand Meter, New. Terry. (Digest of 58-146) 485
Problem as Influenced by Silicone Surface Coatings, The Insulator Contamination. Conner, Lantz. (Digest of 58-22) 297
(Professional Engineers) Your Next Step Registration. Paige 491-2
Programs with Industry in E.E. at the University of Pittsburgh, Graduate Honors. Calvert 1041-4
Progress, A Year of. Barrett 777-80
Progress in Thermal Design of Oil-Cooled Rotating Machinery. Richards. (58-790) 808-12
Progress, Objectives and Trends in Feedback Control Systems. Chestnut 58-63
Project EHV. Abetti 609-74
Properties at Ultrahigh Temperatures, Electrical Insulation. Duncan, Felger. (58-115) 318-22
Protection in Large Capacity Shipboard Electrical Systems, Overcurrent. Cole. (Digest of 58-132) 293
Protection Plan for Distribution Feeders, A. Hayden, Martin, Tilson. (Digest of 58-174) 1000
Pulp and Paper Industry, Evaluation of Wiring Systems for the. Steedley 1110-13
Pump-Turbine Story, The. Jaski 598-600
Letter 867
Pumping Units of Trans-Arabian Pipe Line Company, Intermediate Gas Turbine. Nibley, Hillman 158-62

Q

Quarles, Donald A.—Honorary Member Presentation 787-90

R

Race for Technological Supremacy, Precise Measurement and the. Astin 294-6
Radar Interference to Microwave Communication Services. Campbell. (58-817) ..916-21
(Radio Communications) A New Broadband Microwave Antenna System. Friis, May. (58-185) 502-06
Railway Electrification, The Financial Return on. Brown, Marmaros. (58-32) 244-6
Railway Electrification, Trends in. Ross 797-800
Railway Traction Equipment Ventilating Systems. Widell. (Digest of 58-507) 585
Raquette River Power Project, Electrical Features of the Upper. Van Dyke. (Digest of 58-876) 1115
Ratings Calculated by Digital Computer, Train Performance and Tonnage. Hogan. (58-190) 424-9
Reactance Modulator, The Diode. Montgomery. (Digest of 57-1028) 613
Reactor, Instrumentation for a Boiling Water. Kornblith 696-8
Reactors, Cell Construction for Current Limiting. Sauer. (Digest of 58-46) 413
Reactors for Semiconductor Rectifiers, Current Balancing. Dortort. (Digest of 58-219) 589
Receiving Equipment, Performance of UHF and VHF Transmitting and. Morlock, Swinyard 226-31
Recorder, A Digital and Pictorial Photographic Electronic. McPherson, Sonderby. (58-29) 616-19
Recovery Strength Measurements, Impulse System for Arc. Cobine, Burger, Farrall. (Digest of 58-902 807
Recovery Voltage, Effect of Current Cutoff and Arc Voltage on. Concordia. (Digest of 58-111) 791
Rectangular Conductors, Field Strength Near. Miller. (58-367) 814
Rectifiers, Class III-V Compound. Kich. (CP57-146) 514-16
Rectifiers, Current Balancing Reactors for Semiconductor. Dortort. (Digest of 58-219) 589
Rectifiers for Shipboard Electric Systems, Metallic. Straub, Wiest. (58-135) 312-16
Registration, Your Next Step. Paige 491-2
Relaying Tapped Substations for Faults on High Voltage Transmission Lines. World. Rose, Skuderna. (Digest of 58-25) ..621
Reliability Handbook for Design Engineers, A. Dreste 508-12
Reliability, Philosophy of Engineering. Miller Part I 579-83
Part II 714-18
Remote Control Carrier Systems in Two-Way Closed-Circuit Educational TV. Martin, Warnick, Vandeland 304-06
Report of the Board of Directors, Summary of the 740-3
Report on Mobile Substations, Working Group. (Committee Report) (Digest of 58-7) ..141
Requirements, Determination of Reserve and Interconnection. Limmer. (Digest of 58-139) 393
Requirements for A-C Mining, National and State Electrical. Brown 910-12
Research in India, Technical Education and. Malti 539-43
Research in the USSR, Electrical Engineering Education and. Abetti, Lincks:
Part I. Education 384-90
Part II. Research 479-84
Letter 867
Research Laboratories, Managing. Linville. (CP58-1031) 1001-06
Reserve and Interconnection Requirements, Determination of. Limmer (Digest of 58-139) 393
Residential Heat Pump on Electric Utility Systems, Load and Economic Aspects of the. Bary. (Digest of 57-12) 57
Response Time of Thermal Converters, The Definition and Measurement of the Time Constant and. Hermach. (Digest of 58-11) 620
Restriking and Arrester Destruction on the Pennsylvania Power and Light Company 220-Kv System, Breaker. Galiyano, MacArthur, Mackenzie. (58-94) 308-11
Retrieval, Presently Available Tools for Information. Rabinow 494-8
Return Loss Performance of Telephone Plant in Metropolitan Area, Impedance and. Bogan. (Digest of 58-4) 225
Return Losses on Loaded Trunk Cables and Methods Taken to Improve Them, Study of. Speake. (Digest of 58-214) 604
Rise of Solid Junctions, Temperature. Diebold. (Digest of 57-144) 163
Ritz–Galerkin Method, An Analysis of a Servomechanism with Backlash by the. Ogata, Atkinson. (Digest of 58-86) 1026
Roadway Lighting, New Developments in Light Sources and Optical Systems for. Karns 903-07
Role of AIEE in Electrical Insulation. Berberich 1099-1101
(Rotating Machinery) Evolution of the Design and Operation of Large Thrust Bearings. Baudry. (Digest of 58-171) 801
Rotating Machinery, Progress in Thermal Design of Oil-Cooled. Richards. (58-790) 808-12
(Rotating Machinery) Synchronous-Flux Generator. Smith 605-10
Rotor Displacement Angle on Synchronous Machines, Measurement of. Kinitsky. (Digest of 58-198) 1019
(Russia) A Scientific Tour through the Soviet Union. Dunlap 1027-31
(Russia) Abstracts of Articles from Soviet Technical Publications 703

S

Safety Instrumentation System, Design Considerations in a Nuclear. Underkoffler, Olson 1008-13
SAGE Data Systems, Communication Channels for. James 792-7
Sampled Data Feedback Control Systems, Statistical Design Theory for. Chang. (57-1061; 58-90) 602-03
Satellite Memory, Magnetic Core Event Counter for Earth. Schaefer 52-6
Satellites, and Missiles, Space Vehicles, A Symposium 1077-95
Saturated Servomechanisms, Extended Switching Criterion for Second Order. Diesel. (Digest of 57-1056) 49
Scanning of High-Voltage Power Cables, Corona-Level. Gooding, Slade. (Digest of 57-732) 236
Science and Technology in a Changing Environment. Engstrom 283-7
(Science) Demands of an Explosive Era. Linder 674-80
Science Foundation—Its Role in Electrical Engineering Research, The National. Nordby, Faiman 782-5
Science Frontiers, Education and the. Watson 523-5
Scientific Tour through the Soviet Union, A. Dunlap 1027-31
Scientists, The Demand for and Supply of Engineers and. Cavanaugh 590-1
Screen Room Installation, Measurements of Steep-Front Impulse Waves with an Isolated. Miller, Wittibschlager. (Digest of 58-18) 507
Second Order Saturated Servomechanisms, Extended Switching Criterion for. Diesel. (Digest of 57-1056) 49
Selection and Use of Servo Performance Criteria, Schultz, Rideout. (Digest of 57-1033) 247
Selective Signaling and Control System, A General Purpose. Large, Michael 486-91
Semiconductor Rectifiers, Current Balancing Reactors for. Dortort. (Digest of 58-219) 589
Service Experience and Staged Field Tests on the 115-Kv, 1 Million Kva Gas-Filled Power Circuit Breaker. Henry, Friedrich, Reese. (Digest of 58-128) 693
Service for Large Buildings, Electrical. Hamilton 822-4
Services, Radar Interference to Microwave Communication. Campbell. (58-817) 916-21
Servo Performance Criteria, Selection and Use of. Schultz, Rideout. (Digest of 57-1033) 247

Servomechanism from an Amplitude and Frequency Sensitive Describing Function, Obtaining the Frequency Response Characteristics of a Nonlinear. Stein, Thaler. (Digest of 58-84) 689
Servomechanism with Backlash by the Ritz-Galerkin Method, An Analysis of a. Ogata, Atkinson. (Digest of 58-86) 1026
Servomechanisms, Extended Switching Criterion for Second Order Saturated. Diesel. (Digest of 57-1036) 49
75th Anniversary Celebration, The Institute's. Hickernell 889-91
Shipboard Electric Systems, Metallic Rectifiers for. Straub, Wiest. (58–155) 312-16
Shipboard Electrical Systems. Overcurrent Protection in Large Capacity. Cole. (Digest of 58-132) 293
Short-Circuit Tests on Bundle Conductors. Malmstrom, Gifford, Smith. (DP58-508) 724-7
Short Time Memory Devices and Nonlinear Elements, The Design of Function Generators Using. Revay, Ford. (Digest of 58-247) 927
Signaling and Control System, A General Purpose Selective. Large, Michael 486-91
Silicone Surface Coatings, The Insulator Contamination Problem as Influenced by. Conner, Lantz. (Digest of 58-22) 297
Silver Plated Aluminum Bus Conductor. Burley. (Digest of 58-873) 892
Simplicity in 3-Phase System Circuit Conventions and Concepts. Lewis:
Part I 937-9
Part II 1038-40
Part III 1126-8
Six-Channel Time Division Multiplex for Submarine Cable Telegraphy, An Improved. Wilder. (Digest of 58-44) 707
69-Kv Stop Joint for Connecting Pipe-Type Cable to Oil-Filled Cable. Bolling. (Digest of 58-73) 584
Solid Junctions, Temperature Rise of. Diebold. (Digest of 57-144) 165
(Solid State Devices) An Electroluminescent Digital Indicator with ELPAK Translation Logic. Sack. (Digest of 58-150) ..517
Soviet Technical Publications, Abstracts of Articles from 703
Soviet Union, A Scientific Tour through the. Dunlap 1027-31
(Space Age) Electric Power for Future Flight Vehicles. Demler 997-9
Space, Electrical Frontiers in. Fanuel 893-7
Space Vehicles, Satellites, and Missiles—A Symposium 1077-95
Stability, An Electric Circuit Theory Approach to Finite Difference. Karplus. (Digest of 58-60) 622
Stability Studies, Use of Phase Space in Transient. Bow, Van Ness. (Digest of 58-83) 601
Standard Basic Impulse Insulation Levels. (Committee Report) 727-9
State Electrical Requirements for A-C Mining, National and. Brown 910-12
Static Control for Wood Chip Chemical Digester for the Paper Industry. Hess ..1020-5
Static Electricity in the Petroleum Industry, Howard 610-14
Station Application, Large Gas Turbines for Central Sys. (58-164) 238-42
Statistical Design Theory for Sampled-Data Feedback Control Systems. Chang. (57-1061; 58-90) 602-03
Steam Station Auxiliary Transfer Arrangements, Switchgear with Stored Energy Mechanism Applied to. Brown, Heagerty, Lewis, Smith. (Digest of 58-95) 1096
Steep-Front Impulse Waves with an Isolated Screen Room Installation, Measurements of. Miller, Wittlbachlager. (Digest of 58-18) 507
(Street Lighting) New Developments in Light Sources and Optical Systems for Roadway Lighting. Karns 905-07
Strength and Voltage Life of Polyethylene, Dielectric. Hunt, Koulopoulos, Ware. (Digest of 58-51) 681
Strength Measurements, Impulse System for Arc Recovery. Cobine, Burger, Farrall. (Digest of 58-902) 807
Stroke, The Lightning. Wagner, Hileman (Digest of 58-24) 140
Student Branch: A Co-Curricular Activity, The AIEE. Hickernell 1034-5
Study of Return Losses on Loaded Trunk Cables and Methods Taken to Improve Them. Speake. (Digest of 58-214) ...604
Study Organization, The Television Allocations. Town 126-8
Submarine Cable Telegraphy, An Improved Six-Channel Time Division Multiplex for. Wilder. (Digest of 58-44) 707
Substations, Double-Bus Distribution. Spath, Oliver. (DP58-518) 1116-21
Substations for Faults on High-Voltage Transmission Lines, Relaying Tapped. World, Rose, Skuderna. (Digest of 58-25) 621
Substations, Working Group Report on Mobile. (Committee Report) (Digest of 58-7) ..141
Supervisory Control on the Bonneville System, The Application of. Boston, Shank. (Digest of 58-1021) 1114
Suppression in Magnetic Air Breakers, Leakage Flux. Strom. (Digest of 58-21) ...317
Supremacy, Precise Measurement and the Race for Technological. Astin 294-6
Surface Coatings, The Insulator Contamination Problem as Influenced by Silicone. Conner, Lantz. (Digest of 58-22) 297
Surge Measurement Errors Introduced by Coaxial Cables. Park. (Digest of 58-110) 288
Switch, The Power Application Vacuum. Sorensen 150-4
(Switchgear) Breaker Restriking and Arrester Destruction on the Pennsylvania Power and Light Company 220-Kv System. Galivano, MacArthur, Mackenzie. (58-94) 308-11
(Switchgear) Impulse System for Arc Recovery Strength Measurements. Cobine, Burger, Farrall. (Digest of 58-902) 807
(Switchgear) Leakage-Flux Suppression in Magnetic Air Breakers. Strom. (Digest of 58-21) 317
Switchgear with Stored Energy Mechanism Applied to Steam Station Auxiliary Transfer Arrangements. Brown, Heagerty, Lewis, Smith. (Digest of 58-93) 1096
Switching Circuits, A Method of Designing Transistor. Burroughs 944-7
Switching Circuits, Minimization of Components in Electronic. Beatson. (Digest of 58-3) 213
Switching Criterion for Second Order Saturated Servomechanisms, Extended. Diesel. (Digest of 57-1036) 49
Switching of Intertoll Trunks—Transmission Considerations, Nation-Wide. Wallman. (Digest of 58-5) 237
Switching Structure, 138-Kv Metal-Enclosed Isolated-Phase Bus and. Albright. (Digest of 58-127) 303
Switching System Plan 55-A, Automatic Telegraph. Vernam. (58-45) 418-23
Symposium, A—Space Vehicles, Satellites, and Missiles 1077-95
Synchronous-Flux Generator. Smith 605-10
Synchronous Machines, Measurement of Rotor Displacement Angle on. Kinitsky. (Digest of 58-198) 1019
System, A General Purpose Selective Signaling and Control. Large, Michael 486-91
(System Engineering) The Criterion of Economic Choice. Jeynes, Van Nimwegen (Digest of 58-113) 626
System for Gaging Plating Thickness, A. Myers, Waidelich. (Digest of 58-953) ..815
System for Multiple Fuse Circuits, Fuse-Monitoring, Lezan 154-7
Systems Approach to Determination of Television Coverage. Bowie 129-32
Systems, Communication Channels for SAGE Data. James 792-7
Systems, Transistor Count-Rate. Weisner. 625-5

T

Tapped Substations for Faults on High-Voltage Transmission Lines, Relaying. World, Rose, Skuderna. (Digest of 58-25) ...621
(TASO) Measurement of Television Field Strength. Head 298-302
Technical Education and Research in India. Malti 539-43
Technical Education in Britain. Akhurst. 547-50
Technical Manpower Issues and Related Educational Problems. Meyerhoff, Arnold. 248-9
Technical Publications, Abstracts of Articles from Soviet 703
Technological Supremacy, Precise Measurement and the Race for. Astin 294-6
Technology in a Changing Environment, Science and. Engstrom 283-7
Telegraph Switching System Plan 55-A, Automatic. Vernam. (58-45) 418-23
(Telegraph Systems) Data Transmission Testing Set. Boughtwood, Christie. (58-172) 252-5
Telegraphy, An Improved Six-Channel Time-Division Multiplex for Submarine Cable. Wilder. (Digest of 58-44) 707
Telephone Communication System, A Basis for Transmission Performance Objectives in a. MacAdam. (Digest of 58-59) 307
Telephone Plant in Metropolitan Area, Impedance and Return Loss Performance of. Bogan. (Digest of 58-4) 225
Teletypewriter *AN/AGC-1*, Airborne. Michals. (Digest of 58-47) 597
Television Allocations Study Organization, The. Town 126-8
Television Coverage, Systems Approach to Determination of. Bowie 129-32
Television Field Strength, Measurement of. Head 298-302
(Television) Performance of UHF and VHF Transmitting and Receiving Equipment. Morlock, Swinyard 226-31
(Television) Remote Control Carrier Systems in Two-Way Closed-Circuit Educational TV. Martin, Warnick, Vandeland ..304-06
Temperature Electronic Transformers, An Experimental Study of Magnetic Materials in Ultrahigh. Harms. (58-209) 408-12
Temperature Rise of Solid Junctions. Diebold. (Digest of 57-144) 165
Temperatures, Electrical Insulation Properties at Ultrahigh Duncan, Felger. (58-115) 318-22
Tennessee Valley, House Heating with Electricity in the. Martin 922-6
Testing Set, Data Transmission. Boughtwood, Christie. (58-172) 252-5
Tests on Bundle Conductors, Short-Circuit. Malmstrom, Gifford, Smith. (DP58-508) 724-7
Textile Machines, A-C Group Drives for Modern. Helmick 498-500
Textile Mill, An Ideal Electrical Layout for a. Gelders 404-07
Theory Approach to Finite Difference Stability, An Electric Circuit. Karplus. (Digest of 58-60) 622
Theory for Sampled Data Feedback Control Systems, Statistical Design. Chang. (57-1061; 58-90) 602-03
Theory of Electromechanics, Dimensions for a Unified. Allen 154-40
Letter 665
Thermal Analysis of Transformer Load Cycles. Bennon. (Digest of 58-55) 493
Thermal Converters, The Definition and Measurement of the Time Constant and Response Time of. Hermach. (Digest of 58-11) 620
Thermal Design of Oil-Cooled Rotating Machinery, Progress in. Richards. (58-790 808-12
Thermoelectric Heat Pumping. Lindenblad 802-06
Thickness, A System for Gaging Plating. Myers, Waidelich. (Digest of 58-953) ..815
(345-Kv) Determination of Optimum Transmission Voltage. Camburn, Stafford ..700-03
345-Kv System, 1956 Lightning Field Investigation on the OVEC. Schlomann, Johnson, Price, Anderson 208-12
3-Phase System Circuit Conventions and Concepts, Simplicity in. Lewis:
Part I 937-9
Part II 1038-40
Part III 1126-8
Thrust Bearings, Evolution of the Design and Operation of Large. Baudry. (Digest of 58-171) 801
Tie-In Equipment, Evaluation of Combustion Control-Load Control. Travers, Zelenka, List, Nichols 915
Time Constant and Response Time of Thermal Converters, The Definition and Measurement of the. Hermach. (Digest of 58-11) 620
Time Division Multiplex for Submarine Cable Telegraphy, An Improved Six-Channel. Wilder. (Digest of 58-44) 707
Today's Challenge to Engineering Initiative. Hodnette 682-5
Tonnage Ratings Calculated by Digital Computer, Train Performance and. Hogan. (58-190) 424-9
Tools for Information Retrieval, Presently Available. Rabinow 494-8
Torsional Vibrations Problem, An Analog Computer Study of a. Gray, McElhenny. (Digest of 58-502) 1109
Tour through the Soviet Union, A Scientific. Dunlap 1027-31
Traction Equipment Ventilating Systems, Railway. Widell. (Digest of 58-507) 585

Train Performance and Tonnage Ratings Calculated by Digital Computer. Hogan. (58-190) 424-9
Training Operating Personnel for Nuclear Power Plants. McKeown 122-5
Trans-Arabian Pipe Line Company, Intermediate Gas Turbine Pumping Units of. Nibley, Hillman 158-62
Transfer Arrangements, Switchgear with Stored Energy Mechanism Applied to Steam Station Auxiliary. Brown Heagerty, Lewis, Smith. (Digest of 58-93) 1096
Transfer Functions, Limited Values of Driving Point Impedances and. Jones. (Digest of 58-81) 403
Transfer Load Cycles Thermal Analysis of. Benson. (Digest of 58-55) 493
Transformer Oil Preservation Methods on the Dielectric Strength of Oil, The Effect of. Kaufman, Pierce, Uhlig. (Digest of 57-1039) 65
Transformers, An Experimental Study of Magnetic Materials in Ultrahigh Temperature Electronic. Harms. (58-209) 408-12
(Transformers) Cell Construction for Current Limiting Reactors. Sauer. (Digest of 58-46) 413
Transformers, Measurement of Iron and Copper Losses in. Specht, Rademacher, Moore. (Digest of 58-158) 402
(Transformers) 138-Kv Metal-Enclosed Isolated-Phase Bus and Switching Structure. Albright. (Digest of 58-127) 303
Transient Stability Studies, Use of Phase Space in. Bow, Van Ness. (Digest of 58-83) ..601
Transistor Count-Rate Systems. Weisner .623-5
Transistor Switching Circuits, A Method of Designing. Burroughs 944-7
Translation Logic, An Electroluminescent Digital Indicator with ELPAK. Sack. (Digest of 58-150) 517
Transmission Considerations, Nation-Wide Switching of Intertoll Trunks—. Wallman. (Digest of 58-5) 237
(Transmission) Current-Carrying Capacity of ACSR. House, Tuttle. (Digest of 58-41) 719
(Transmission) Effect of Current Cutoff and Arc Voltage on Recovery Voltage. Concordia. (Digest of 58-111) 791
Transmission Lines, Lightning Performance of 138-Kv Twin Circuit. Caswell, Koncel, Johnson, Schultz. (58-1084) 142-8
Transmission Lines, Relaying Tapped Substations for Faults on High-Voltage. World, Rose, Skuderna. (Digest of 58-25) 621
(Transmission) 1956 Lightning Field Investigation on the OVEC 345-Kv System. Schlomann, Johnson, Price, Anderson ...208-12
Transmission Performance Objectives in a Telephone Communication System, A Basis for. MacAdam. (Digest of 58-59) ..307
(Transmission) Project EHV. Abetti ..669-74
Transmission Testing Set, Data. Boughiwood, Christie. (58-172) 232-5
(Transmission) The Lightning Stroke. Wagner, Hileman. (Digest of 58-24) 149
Transmission Voltage, Determination of Optimum. Camburn, Stafford 700-03
Transmitting and Receiving Equipment, Performance of UHF and VHF. Morlock, Swinard 226-31
(Transportation, Land) Railway Traction Equipment Ventilating Systems. Widell. (Digest of 58-507) 585
(Transportation, Land) The Financial Return on Railway Electrification. Brown, Marmaros. (58-32) 244-6
(Transportation, Land) Train Performance and Tonnage Ratings Calculated by Digital Computer. Hogan. (58-190) 424-9
(Transportation, Land) Trends in Railway Electrification. Ross 797-800
(Transportation, Marine) Overcurrent Protection in Large Capacity Shipboard Electrical Systems. Cole. (Digest of 58-152) 295
(Transportation, Marine) Special Power and Lighting Systems on Aircraft Carriers. Cole, Garbacz. (Digest of 58-567) ..1014
Treeing Effects in Polyethylene. Kitchin, Pratt. (58-121) 218-23
Trends in Railway Electrification. Ross. 797-800
Trunk Cables and Methods Taken to Improve Them, Study of Return Losses on Loaded. Speake. (Digest of 58-214) 604
Trunks—Transmission Considerations, Nation-Wide Switching of Intertoll. Wallman. (Digest of 58-5) 237
Tube Evaluation for Guided Missile Applications, Electron. Chandler 690-2
Turbine, Friction and Windage Loss Tests of McNary Generators with Coupled and Uncoupled. Cox, Krahn. (Digest of 57-939) 815
Turbine Pumping Units of Trans-Arabian Pipe Line Company, Intermediate Gas. Nibley, Hillman 158-62
Turbine Story, The Pump-. Jaski 598-600
Letter 867
Turbines for Central Station Application, Large Gas. Sys. (58-164) 238-42
Turbines, Valve Point Loading of. Decker, Brooks. (Digest of 58-166) 501
Twin Circuit Transmission Lines, Lightning Performance of 138-Kv. Caswell, Koncel, Johnson, Schultz. (57-1084) 142-8
230-Kv Oil-Filled Cables, The Vancouver. Wollaston, Horne. (58-783) 816-21

U

UHF and VHF Transmitting and Receiving Equipment, Performance of. Morlock, Swinyard 226-31
Ultrahigh Temperature Electronic Transformers. An Experimental Study of Magnetic Materials in. Harms. (58-209) 408-12
Ultrahigh Temperatures, Electrical Insulation Properties at. Duncan, Felger. (58-115) 318-22
(Underground) The Vancouver 230-Kv Oil-Filled Cables. Wollaston, Horne. (58-783) 816-21
Unified Theory of Electromechanics, Dimensions for a. Allen 134-40
Letter 665
University of Pittsburgh, Graduate Honors Programs with Industry in E.E. at the. Calvert 1041-4
Upper Raquette River Power Project, Electrical Features of the. Van Dyke. (Digest of 58-876) 1115
Use of Phase Space in Transient Stability Studies. Bow, Van Ness. (Digest of 58-83) ..601
USSR, Electrical Engineering Education and Research in the. Abbetti, Lincks:
Part I. Education 384-90
Part II. Research 479-84
Letter 867,994
Utility Loads, Application of Vacuum Switches to. Rittenhouse 414-17
Utility Systems, Load and Economic Aspects of the Residential Heat Pump on Electric. Bary. (Digest of 57-12) 57

V

Vacuum, Insulation Aging in Pure Oxygen and in a. Whitman. (Digest of 58-119) 781
Vacuum Switch, The Power Application. Sorensen 150-4
Vacuum Switches to Utility Loads, Application of. Rittenhouse 414-17
Valve Point Loading of Turbines. Decker, Brooks. (Digest of 58-166) 501
Values of Driving Point Impedances and Transfer Functions, Limited. Jones. (Digest of 58-81) 403
Vancouver 230-Kv Oil-Filled Cables, The. Wollaston, Horne. (58-783) 816-21
Vehicles, Electric Power for Future Flight. Demler 997-9
Ventilating Systems, Railway Traction Equipment. Widell. (Digest of 58-507) 585
VHF Transmitting and Receiving Equipment, Performance of UHF and. Morlock, Swinyard 226-31
Vibrations Problem, An Analog Computer Study of a Torsional. Gray, McElhennv. (Digest of 58-502) 1109
Voltage, Determination of Optimum Transmission. Camburn, Stafford 700-03
Voltage Life of Polyethylene, Dielectric Strength and. Hunt, Koulopoulos, Ware. (Digest of 58-51) 681
Voltage on Recovery Voltage, Effect of Current Cutoff and Arc. Concordia. (Digest of 58-111) 791

W

(Wages) Today's Challenge to Engineering Initiative. Hodnette 682-5
Water Reactor, Instrumentation for a Boiling. Kornblith 696-8
Watt-Hour Meter Demonstrator, A. Moore 933-7
Waves with an Isolated Screen Room Installation, Measurements of Steep-Front Impulse. Miller, Wittibschlager. (Digest of 58-18) 507
West Penn's Economic Dispatch Computer, Operating Experience with. Hamilton, Osterle. (Digest of 58-207) 908
Windage Loss Tests of McNary Generators with Coupled and Uncoupled Turbine, Friction and. Cox, Krahn. (Digest of 57-939) 813
(Wire Communication) Impedance and Return Loss Performance of Telephone Plant in Metropolitan Area. Bogan. (Digest of 58-4) 225
Wire Exploration of Alternating or Constant Magnetic Fields, Iron. Moore 1124-6
Wiring Systems for the Pulp and Paper Industry, Evaluation of. Steedley 1110-15
Wisdom, Knowledge Plus. Weber 575-9
Wood Chip Chemical Digester for the Paper Industry, Static Control for. Hess ..1020-5
Wood, Delete John. Chipman 694-5
Working Group Report on Mobile Substations. (Committee Report) (Digest of 58-7) ..141

Y

Year of Progress, A. Barrett 777-80

Author Index

Abetti, P. A. Project EHV 669-74
Abetti, P. A.; G. F. Lincks. Electrical Engineering Education and Research in the USSR:
Part I. Education 384-90
Part II. Research 479-84
Letter 994
Akhurst, D. O. (Letter) Britain? 774
Akhurst, D. O. Technical Education in Britain 547-50
Albright, R. H. 138-Kv Metal-Enclosed Isolated-Phase Bus and Switching Structure. (Digest of 58-127) 303
Alger, P. L. The Growing Importance of Ethics to Engineers 42-5
Allen, L. W. Dimensions for a Unified Theory of Electromechanics. 134-40
Allen, L. W. (Letter) Orderly Creative Inventing 379
Anderson, J. G.; R. H. Schlomann, I. B. Johnson, W. S. Price. 1956 Lightning Field Investigation on the OVEC 345-Kv System. (57-1087) 208-12
Anderson, R. E. Magnetic Amplifier Design: Part I. The Core. (Digest of 57-922) ..394
Part II. The Windings. (Digest of 58-39) 395
Arnold, G. F.; H. A. Meverhoff. Technical Manpower Issues and Related Educational Problems 248-9
Astin, A. V. Precise Measurement and the Race for Technological Supremacy ..294-6
Atkinson, C. P.; Katsuhiko Ogata. An Analysis of a Servomechanism with Backlash by the Ritz–Galerkin Method. (Digest of 58-86) 1026
Atkinson, R. W. India's Engineering Education 325-7

B

Baker, R. M. Classical Heat Flow Problems Applied to Induction Billet Heating. (Digest of 58-202) 909
Baker, V. B.; L. A. Kilgore. Human Factors in Engineering 586-8
Barrett, W. J. A Year of Progress 777-80
Barrett, W. J. Distinction in Four Fields.787-8
Barrett, W. J. Message from the President 383
Barrett, Walter J. The Functional Plan. 119-21
Bary, C. W. Load and Economic Aspects of the Residential Heat Pump on Electric Utility Systems. (Digest of 57-12) 57
Baudry, R. A. Evolution of the Design and Operation of Large Thrust Bearings. (Digest of 58-171) 801
Beatson, T. J. Minimization of Components in Electronic Switching Circuits. (Digest of 58-3) 213
Bennon, Saul. Thermal Analysis of Transformer Load Cycles. (Digest of 58-55). 493
Berberich, L. J. Role of AIEE in Electrical Insulation 1099-1101

Black, H. S. Invention in Engineering ..722-3
Bogan, L. B. Impedance and Return Loss Performance of Telephone Plant in Metropolitan Area. (Digest of 58-4) 225
Bolling, R. H., Jr. 69-Kv Stop Joint for Connecting Pipe-Type Cable to Oil-Filled Cable. (Digest of 58-73) 584
Bond, T. E.; C. F. Kelly, N. R. Ittner. Artificial Cooling of Livestock in Hot Climates. (Digest of 58-1007) 1102
Boston, J. R.; K. E. Shank. The Application of Supervisory Control on the Bonneville System. (Digest of 58-1021) 1114
Boughtwood, J. E.; T. A. Christie. Data Transmission Testing Set. (58-172) ..232-5
Bow, S. T.; J. E. Van Ness. Use of Phase Space in Transient Stability Studies. (Digest of 58-83) 601
Bowers, J. L. System Design 1091-2
Bowie, R. M. Systems Approach to Determination of Television Coverage 129-32
Branigan, G. F.; C. C. Chambers. ECPD Accreditation of Engineering Curricula 686-8
Brookes, A. D.; G. L. Decker. Valve Point Loading of Turbines. (Digest of 58-166) 501
Brown, C. L. National and State Electrical Requirements for A-C Mining 910-12
Brown, H. F.; H. E. Marmaros. The Financial Return on Railway Electrification. (58-32) 244-6
Brown, P. G.; J. Heagerty, D. G. Lewis, E. M. Smith. Switchgear with Stored Energy Mechanism Applied to Steam Station Auxiliary Transfer Arrangements. Digest of 58-93) 1096
Burger, E. E.; J. D. Cobine, G. A. Farrall. Impulse System for Arc Recovery Strength Measurements. (Digest of 58-902) 807
Burley, C. E. Silver Plated Aluminum Bus Conductor. (Digest of 58-873) 892
Burroughs, J. D. A Method of Designing Transistors Switching Circuits 944-7

C

Calvert, J. F. Graduate Honors Programs with Industry in E.E. at the University of Pittsburgh 1041-4
Camburn, R. D.; R. L. Stafford. Determination of Optimum Transmission Voltage. 700-08
Campbell, R. D. Radar Interference to Microwave Communication Services. (58-817) 916-21
Caswell, R. W.; E. T. B. Gross, E. F. Koncel, Jr. Analytical Studies of Lightning Performance of 138-Kv Double Circuit Lines of the Commonwealth Edison Company. (Digest of 58-14) 1007
Caswell, R. W.; E. F. Koncel, Jr., L. B. Johnson, N. R. Schultz. Lightning Performance of 138-Kv Twin Circuit Transmission Lines (57-1084) 142-8
Cavanaugh, W. T. The Demand for and Supply of Engineers and Scientists. ..590-1
Chambers, C. C.; G. F. Branigan. ECPD Accreditation of Engineering Curricula. 68-8
Chandler, H. G. Electron Tube Evaluation for Guided Missile Applications 690-2
Chang, S. L. Statistical Design Theory for Sampled Data Feedback Control Systems. (57-1061; 58-90) 602-03
Chestnut, Harold. Objectives and Trends in Feedback Control Systems Progress ..58-63
Chipman, R. A. Delete John Wood 694-5
Christie, T. A.; J. E. Boughtwood. Data Transmission Testing Set. (58-172) ..232-5
Cobine, J. D.; E. E. Burger, G. A. Farrall. Impulse System for Arc Recovery Strength Measurements. (Digest of 58-902) 807
Cole, J. R. Overcurrent Protection in Large Capacity Shipboard Electrical Systems. (Digest of 58-152) 295
Cole, J. R.; M. L. Garbacz. Special Power and Lighting Systems on Aircraft Carriers. (Digest of 58-567) 1014
Concordia, C. Effect of Current Cutoff and Arc Voltage on Recovery Voltage. (Digest of 58-111) 791
Conner, J. E.; A. D. Lantz, Jr. The Insulator Contamination Problem as Influenced by Silicone Surface Coatings. (Digest of 58-22) 297
Cox, D. R.; R. L. Krahn. Friction and Windage Loss Tests of McNary Generators with Coupled and Uncoupled Turbine. (Digest of 57-939) 813
Creamer, W. J. Engineering Education Yesterday, Today, and Tomorrow 929-32
Crothers, J. M. The Electrical Engineer in the Petroleum Industry 45-8

D

Davies, C. E. The Builders of Engineers' Council for Professional Development. 50-2
De Bra, D. B.; E. V. Stearns. Attitude Control—III 1088-90
Decker, G. L.; A. D. Brooks. Valve Point Loading of Turbines. (Digest of 58-166) 501
Demler, M. C. Electric Power for Future Flight Vehicles 997-9
Denholm, A. S. (Letter) Britain? 773
DeWitt, Nicholas. (Letter) USSR EE Education and Research 867
Diebold, E. J. Temperature Rise of Solid Junctions. (Digest of 57-144) 165
Diesel, J. W. Extended Switching Criterion for Second Order Saturated Servomechanisms. (Digest of 57-1036) 49
Dodge, H. A. (Letter) Professional Recognition 1160
Dortort, I. K. Current Balancing Reactors for Semiconductor Rectifiers. (Digest of 58-219) 589
Draper, C. S. Space Flight Guidance ..1081-2
Dreste, F. E. A Reliability Handbook for Design Engineers 508-12
Duncan, G. L.; M. M. Felger. Electrical Insulation Properties at Ultrahigh Temperatures. (58-115) 318-22
Dunlap, W. C. A Scientific Tour through the Soviet Union 1027-31

E

Engstrom, E. W. Science and Technology in a Changing Environment 283-7
Ernst, R. C. The Place of the Engineer in Industrial Management—A Large Company's Viewpoint 203-05

F

Faiman, R. N.; G. M. Nordby. The National Science Foundation—Its Role in Electrical Engineering Research 782-5
Faneuf, Leston. Electrical Frontiers in Space 893-7
Farrall, G. A.; J. D. Cobine, E. E. Burger. Impulse System for Arc Recovery Strength Measurements. (Digest of 58-902) 807
Farrior, J. S. Attitude Control—I. 1084-6
Felger, M. M.; G. I. Duncan. Electrical Insulation Properties at Ultrahigh Temperatures. (58-119) 318-22
Finzi, L. A. Introducing Young Engineers to Magnetic Amplifier Problems 1035-8
Ford, D. J.; A. W. Revay. The Design of Function Generators Using Short Time Memory Devices and Nonlinear Elements. (Digest of 58-247) 927
Freeman, J. J. (Letter) Strato-Lab Research Aims 1160
Friedrich, R. E.; E. B. Henry, F. L. Reese. Service Experience and Staged Field Tests on the 115-Kv, 1 Million Kva Gas-Filled Power Circuit Breaker. (Digest of 58-128) 693
Friis, R. W.; A. S. May. A New Broadband Microwave Antenna System. (58-185) 502-06

G

Galiyano, M. C.; C. A. MacArthur, W. F. Mackenzie. Breaker Restriking and Arrester Destruction on the Pennsylvania Power and Light Company 220-Kv System. (58-94) 508-11
Garbacz, M. L.; J. R. Cole. Special Power and Lighting Systems on Aircraft Carriers. (Digest of 58-567) 1014
Gardam, C. M.; R. May. Electrical Features of Bay Shore Generating Station. (Digest of 58-512) 786
Gelbke, A. W. The Electrical Industry in Mexico 595-6
Gelders, M. V. An Ideal Electrical Layout for a Textile Mill 404-7
Gifford, L. G.; A. L. Malmstrom, J. O. Smith. Short-Circuit Tests on Bundle Conductors. (DP58-508) 724-7
Goldman, R. N. DDA—What Is It? 592-4
Gooding, F. H.; H. B. Slade. Corona-Level Scanning of High-Voltage Power Cables. (Digest of 57-732) 236
Gray, R. T.; S. W. McElhenny. An Analog Computer Study of a Torsional Vibrations Problem. (Digest of 58-502) 1109
Green, E. I. The Engineering Foundation—Its Aims and Activities 390-2
Gross, E. T. B.; R. W. Caswell, E. F. Koncel, Jr. Analytical Studies of Lightning Performance of 138-Kv Double Circuit Lines of the Commonwealth Edison Company. (Digest of 58-14) 1007

H

Hamilton, O. R. Electrical Service for Large Buildings 822-4
Hamilton, W. R.; W. H. Osterle. Operation Experience with West Penn's Economic Dispatch Computer. (Digest of 58-207). 908
Hanna, R. E. Stabilization of Vehicles ..1082-4
Harms, H. B. An Experimental Study of Magnetic Materials in Ultrahigh Temperature Electronic Transformers. (58-209) ..408-12
Hayden, J. R.; J. E. Martin, R. L. Tilson. A Protection Plan for Distribution Feeders. (Digest of 58-174) 1000
Head, H. T. Measurement of Television Field Strength 298-302
Heagerty, J. J.; P. G. Brown, D. G. Lewis, E. M. Smith. Switchgear with Stored Energy Mechanism Applied to Steam Station Auxiliary Transfer Arrangements. (Digest of 58-93) 1096
Helmick, C. G. A-C Group Drives for Modern Textile Machines 498-500
Henry, E. B.; R. E. Friedrich, F. L. Reese. Service Experience and Staged Field Tests on the 115-Kv, 1 Million Kva Gas-Filled Power Circuit Breaker. (Digest of 58-128) 693
Hermach, F. L. The Definition and Measurement of the Time Constant and Response Time of Thermal Converters. (Digest of 58-11) 620
Herr, D. L. Introduction at Symposium. 1077-8
Hess, G. J. Static Control for Wood Chip Chemical Digester for the Paper Industry 1020-5
Hickernell, L. F. Opening Remarks at Symposium 1077
Hickernell, L. F. The AIEE Student Branch: A Co-Curricular Activity. 1034-5
Hickernell, L. F. The Institute and Electrical Insulation 1097-9
Hickernell, L. F. The Institute's 75th Anniversary Celebration 889-91
Hileman, A. R.; C. F. Wagner. The Lightning Stroke. (Digest of 58-24) 149
Hill, J. A. (Letter) Grounding Electric Appliances 280
Hill, W. S. Industry Viewpoints on Educating Electrical Engineers 544-6
Hillman, A. Y., Jr.; P. P. Nibley. Intermediate Gas Turbine Pumping Units of Trans-Arabian Pipe Line Company. 158-62
Hodnette, J. K. Acceptance of Edison Medal 216-17
Hodnette, J. K. Today's Challenge to Engineering Initiative 682-5
Hogan, J. E. Train Performance and Tonnage Ratings Calculated by Digital Computer. (58-190) 424-9
Homan, R. A. (Letter) Unified-Theory Dimensions 380
Honnell, P. M. Electrical Engineering Education for the Future 940-3
Horgan, J. D.; J. A. Pesavento. The Accurate Determination of Capacitance by Conjoining Analytical and Analog Techniques. (Digest of 58-65) 513
Horne, L. R.; F. O. Wollaston. The Vancouver 230-Kv Oil-Filled Cables. (58-783) ..816-21
House, H. E.; P. D. Tuttle. Current-Carrying Capacity of ACSR. (Digest of 58-41) ..719
Howard, J. C. Static Electricity in the Petroleum Industry 610-14
Hunt, C. H.; M. J. Koutlopoulos, P. H. Ware. Dielectric Strength and Voltage Life of Polyethylene. (Digest of 58-51) 681

I

Ingram, S. B. An Electrical Engineer's World —1957 181-4
Ittner, N. R.; C. F. Kelly, T. E. Bond. Artificial Cooling of Livestock in Hot Climates. (Digest of 58-1007) 1102

J

James, R. T. Communication Channels for SAGE Data Systems 792-7

Jaski, F. E. The Pump-Turbine Story.598-600
Letter 867
Jeynes, P. H.; L. Van Nimwegen. The Criterion of Economic Choice. (Digest of 58-113) 626
Johnson, I. B.; R. W. Caswell, E. F. Koncel, Jr., N. R. Schultz. Lightning Performance of 138-Kv Twin Circuit Transmission Lines. (57-1084) 142-8
Johnson, I. B.; R. H. Schlomann, W. S. Price, J. G. Anderson. 1956 Lightning Field Investigation on the OVEC 345-Kv System. (57-1087) 208-12
Jones, D. E.; P. W. Waddington. Coupling Methods for Power Line Carrier Systems. (Digest of 57-1093) 64
Jones, Sheldon. Limited Values of Driving Point Impedances and Transfer Functions. (Digest of 58-81) 403
Juzycz, M. S. Fundamentals of Infrared. 704-06

K

Karns, E. B. New Developments in Light Sources and Optical Systems for Roadway Lighting 903-07
Karplus, W. J. An Electric Circuit Theory Approach to Finite Difference Stability. (Digest of 58-60) 622
Kaufman, R. B.; J. L. Pierce, E. R. Uhlig. The Effect of Transformer Oil Preservation Methods on the Dielectric Strength of Oil. (Digest of 57-1039) 65
Kelly, C. F.; T. E. Bond, N. R. Ittner. Artificial Cooling of Livestock in Hot Climates. (Digest of 58-1007) .....
Kelly, M. J. Career of the Medalist 720-2
Kessel, A. A.; R. S. Norman. Internal Oxidation Mechanism for Nontracking Organic Insulations. (Digest of 58-211) 699
Kich, G. B. Class III-V Compound Rectifiers. (CP57-1046) 514-16
Kilgore, L. A. Motivation and Human Factors in Engineering Leadership. (58-572) 1015-18
Kilgore, L. A.; V. B. Baker. Human Factors in Engineering 586-8
Kinitsky, V. A. (Letter) Unified Dimensions Theory 665
Kinitsky, V. A. Measurement of Rotor Displacement Angle on Synchronous Machines. (Digest of 58-198) 1019
Kitchin, D. W.; O. S. Pratt. Treeing Effects in Polyethylene. (58-121) 218-23
Klass, P. J. (Letter) Engineer Registration 773
Koncel, E. F., Jr.; R. W. Caswell, E. T. B. Gross Analytical Studies of Lightning Performance of 138-Kv Double Circuit Lines of the Commonwealth Edison Company. (Digest of 58-14) 1007
Koncel, E. F., Jr.; R. W. Caswell, I. B. Johnson, N. R. Schultz. Lightning Performance of 138-Kv Twin Circuit Transmission Lines (57-1084) 142-8
Kornblith, Lester, Jr. Instrumentation for a Boiling Water Reactor 696-8
Koulopoulos, M. J.; G. H. Hunt, P. H. Ware. Dielectric Strength and Voltage Life of Polyethylene. (Digest of 58-51) 681
Krahn, R. L.; D. R. Cox. Friction and Windage Loss Tests of McNary Generators with Coupled and Uncoupled Turbine. (Digest of 57-939) 813

L

Lantz, A. D., Jr.; J. E. Conner. The Insulator Contamination Problem as Influenced by Silicone Surface Coatings. (Digest of 58-22) 297
Large, W. V. K.; H. J. Michael. A General Purpose Selective Signaling and Control System. 486-91
Levitt, I. M. The Motions of Satellites. 1078-81
Lewis, D. G.; P. G. Brown, J. J. Heagerty, E. M. Smith. Switchgear with Stored Energy Mechanism Applied to Steam Station Auxiliary Transfer Arrangements. (Digest of 58-93) 1096
Lewis, W. A. Simplicity in 3-Phase System Circuit Conventions and Concepts:
Part I 937-9
Part II 1038-40
Part III 1126-8
Lezan, G. R. Fuse-Monitoring System for Multiple Fuse Circuits 154-7
Limmer, H. D. Determination of Reserve and Interconnection Requirements. (Digest of 58-139) 393
Lincks, G. F.; P. A. Abetti. Electrical Engineering Education and Research in the USSR:
Part I. Education 384-90
Part II Research 479-84
Letter 944
Lindenblad, N. E. Thermoelectric Heat Pumping 802-06
Linder, C. H. Demands of an Explosive Era 674-80
Linville, T. M. Managing Research Laboratories. (CP58-1031) 1001-06
List, H. A.; R. H. Travers, D. B. Zelenka, C. Nichols. Evaluation of Combustion Control-Load Control Tie-In Equipment. (Digest of 58-168) 915
Logan, H. L. Fundamental Aspects of Lighting 36-41

M

MacAdam, W. K. A Basis for Transmission Performance Objectives in a Telephone Communication System. (Digest of 58-59) 807
MacArthur, C. A.; M. C. Galiyano, W. F. Mackenzie Breaker Restriking and Arrester Destruction on the Pennsylvania Power and Light Company 220-Kv System. (58-94) 308-11
Mackenzie, W. F.; M. C. Galiyano, C. A. MacArthur. Breaker Restriking and Arrester Destruction on the Pennsylvania Power and Light Company 220-Kv System. (58-94) 308-11
Malmstrom, A. L.; L. G. Gifford, J. O. Smith. Short-Circuit Tests on Bundle Conductors. (DP58-508) 724-7
Malti, M. G. Technical Education and Research in India 539-43
Mann, W. B. (Letter) Women Engineers .279
Marmaros, H. E.; H. F. Brown. The Financial Return on Railway Electrification. (58-32) 244-6
Martin, B. H. House Heating with Electricity in the Tennessee Valley 922-6
Martin, J. E.; J. R. Hayden, R. L. Tilson. A Protection Plan for Distribution Feeders. (Digest of 58-174) 1000
Martin, J. R.; G. W. Warnick, R. N. Vandeland. Remote Control Carrier Systems in Two-Way Closed-Circuit Educational TV. 804-06
May, A. S.; R. W. Friis. A New Broadband Microwave Antenna System. (58-185). 502-06
May, Richard; C. M. Gardam. Electrical Features of Bay Shore Generating Station. (Digest of 58-512) 786
McElhenny, S. W.; R. T. Gray. An Analog Computer Study of a Torsional Vibrations Problem. (Digest of 58-502) 1109
McKeown, W. G. Training Operating Personnel for Nuclear Power Plants 122-5
McPherson, R. G.; I. A. Sonderby. A Digital and Pictorial Photographic Electronic Recorder. (58-29) 616-19
McPherson, Robert J. (Letter) Technical and Scientific Center 476
Meyerhoff, H. A.; G. F. Arnold. Technical Manpower Issues and Related Educational Problems 248-9
Michael, H. J.; W. V. K. Large. A General Purpose Selective Signaling and Control System 486-91
Michals, R. A. Airborne Teletypewriter *AN/AGC-1*. (Digest of 58-47) 597
Miller, C. J., Jr.; J. F. Wittibschlager. Measurements of Steep-Front Inpulse Waves with an Isolated Screen Room Installation. (Digest of 58-18) 507
Miller, F. W. The Place of the Engineer in Industrial Management—A Small Company's Viewpoint 205-07
Miller, J. H. Field Strength Near Rectangular Conductors. (58-367) 814
Miller, M. L. Philosphy of Engineering Reliability.
Part I 579-85
Part II 714-18
Milton, W. B. (Letter) Atomic Nucleus .994
Mitchell, Jonathan. An Accurate Analog Frequency Measuring Circuit 912-14
Mommo, E. J. (Letter) Atomic Nucleus 1159
Montgomery, G. F. The Diode Reactance Modulator. (Digest of 57-1028) 615
Moore, A. D. A Watt-Hour Meter Demonstrator 953-7
Moore, A. D. Iron Wire Exploration of Alternating or Constant Magnetic Fields. 1124-6
Moore, H. R.; T. R. Specht, L. B. Rademacher. Measurement of Iron and Copper Losses in Transformers. (Digest of 58-158) 402
Morlock, W. J.; W. O. Swinyard. Performance of UHF and VHF Transmitting and Receiving Equipment 226-31
Myers, R. G.; D. L. Waidelich. A System for Gaging Plating Thickness. (Digest of 58-933) 815

N

Narayana Rao, H. V.; M. R. Sitaram, R. Sreedharan. Power for Mysore. .1103-05
Nibley, P. P.; A. Y. Hillman, Jr. Intermediate Gas Turbine Pumping Units of Trans-Arabian Pipe Line Company. 158-62
Nichols, C.; R. H. Travers, D. B. Zelenka, H. A. List. Evaluation of Combustion Control-Load Control Tie-In Equipment. (Digest of 58-168) 915
Nordby, G. M.; R. N. Faiman. The National Science Foundation—Its Role in Electrical Engineering Research 782-5
Norman, R. S.; A. A. Kessel. Internal Oxidation Mechanism for Nontracking Organic Insulations. (Digest of 58-211) 699
Norris, E. T. (Letter) Low-Sound Enclosures 379

O

Ogata, Katsuhiko; C. P. Atkinson. An Analysis of a Servomechanism with Backlash by the Ritz-Galerkin Method. (Digest of 58-86) 1026
Oliver, J. B.; J. G. Spath. Double-Bus Distribution Substations. (DP58-518) .1116-21
Olson, R. G.; V. S. Underkoffler. Design Considerations in a Nuclear Safety Instrumentation System 1008-13
Osterle, W. H.; W. R. Hamilton. Operation Experience with West Penn's Economic Dispatch Computer. (Digest of 58-207). 908

P

Paige, A. E. Your Next Step Registration. 491-2
Park, J. H. Surge Measurement Errors Introduced by Coaxial Cables. (Digest of 58-110) 288
Pesavento, J. A.; J. D. Horgan. The Accurate Determination of Capacitance by Conjoining Analytical and Analog Techniques. (Digest of 58-65) 513
Pierce, J. L.; R. B. Kaufman, E. R. Uhlig. The Effect of Transformer Oil Preservation Methods on the Dielectric Strength of Oil. (Digest of 57-1039) 65
Plunkett, R. Noise Control of Domestic Appliances 1106-08
Pratt, O. S.; D. W. Kitchin. Treeing Effects in Polyethylene. (58-121) 218-23
Price, W. S.; R. H. Schlomann, I. B. Johnson, J. G. Anderson. 1956 Lightning Field Investigation on the OVEC 345-Kv System. (57-1087) 208-12

Q

Quarles, Donald. The Role of Military Electronics 788-90

R

Rabinow, Jacob. Presently Available Tools for Information Retrieval 494-8
Race, H. H. Managing Versus Manipulation 897-902
Rademacher, L. B.; T. R. Specht, H. R. Moore. Measurement of Iron and Copper Losses in Transformers. (Digest of 58-158) 402
Ralls, J. W. (Letter) Unified Dimensions Theory 666
Reese, F. L.; E. B. Henry, R. E. Friedrich. Service Experience and Staged Field Tests on the 115-Kv, 1 Million Kva Gas-Filled Power Circuit Breaker. (Digest of 58-128) 695
Reps, D. N. Digital Computers for Distribution Systems. 708-15
Revay, A. W.; D. L. Ford. The Design of Function Generators Using Short Time Memory Devices and Nonlinear Elements. (Digest of 58-247) 927

Richards, F. B. Progress in Thermal Design of Oil-Cooled Rotating Machinery. (58-790) 808-12
Rideout, V. C.; W. C. Schultz. Selection and Use of Servo Performance Criteria. (Digest of 57-1033) 247
Rittenhouse, J. W. Application of Vacuum Switches to Utility Loads. 414-17
Robertson, R. E. Attitude Control—II. 1086-8
Robertson, Elgin B. Edison Medal History. 214
Romnes, H. I. History of the Lamme Medal 720
Rose, C. L.; R. W. World, J. E. Skuderna. Relaying Tapped Substations for Faults on High-Voltage Transmission Lines. (Digest of 58-25) 621
Rosenberg, L. T. Gas Flow and Heat Transfer in Conductor-Cooled Machines. (Digest of 57-1006) 133
Ross, B. A. Trends in Railway Electrification. 797-800

S

Sack, E. A. An Electroluminescent Digital Indicator with ELPAK Translation Logic. (Digest of 58-150) 517
Samms, W. H. The Edison Medalist 214-16
Sauer, L. E. Cell Construction for Current Limiting Reactors. (Digest of 58-46) 413
Schaefer, D. H. Magnetic Core Event Counter for Earth Satellite Memory. 52-6
Scheirer, E. W.; L. Winitsky. Cable Installations on Bridges. (Digest of 58-17) 224
Schlomann, R. H.; I. B. Johnson, W. S. Price, J. G. Anderson. 1956 Lightning Field Investigation on the OVEC 345-Kv System. (57-1087) 208-12
Schultz, N. R.; R. W. Caswell, E. F. Koncel, Jr., I. B. Johnson. Lightning Performance of 138-Kv Twin Circuit Transmission Lines. (57-1084) 142-8
Schultz, W. C.; V. C. Rideout. Selection and Use of Servo Performance Criteria. (Digest of 57-1033) 247
Seaton, S. L. (Letter) Deduction Correct 572
Seaton, S. L. Entering the Machine Domain. (CP58-86) 289-92
Shank, K. E.; J. R. Boston. The Application of Supervisory Control on the Bonneville System. (Digest of 58-1021) 1114
Sitaram, M. R.; H. V. Narayana Rao, R. Sreedharan. Power for Mysore. 1103-05
Skuderna, J. E.; R. W. World, C. L. Rose. Relaying Tapped Substations for Faults on High-Voltage Transmission Lines. (Digest of 58-25) 621
Slade, H. B.; F. H. Gooding. Corona-Level Scanning of High-Voltage Power Cables. (Digest of 57-752) 236
Smith, E. M.; P. G. Brown, J. L. Heagerty, D. G. Lewis. Switchgear with Stored Energy Mechanism Applied to Steam Station Auxiliary Transfer Arrangements. (Digest of 58-93) 1096
Smith, Harold E. (Letter) Registration Prestige 1074
Smith, J. O.; A. L. Malmstrom, L. G. Gifford. Short-Circuit Tests on Bundle Conductors. (DP58-508) 724-7
Smith, O. J. M. Synchronous Flux Generator. 605-10
Sollecito, W. E. Fitting Computers into Control Systems 396-401
Sonderby, I. A.; R. G. McPherson. A Digital and Pictorial Photographic Electronic Recorder. (58-29) 616-19
Sorensen, R. W. The Power Application Vacuum Switch 150-4
Spath, J. G.; J. B. Oliver. Double-Bus Distribution Substations. (DP58-518). 1116-21
Speake, G. H. Study of Return Losses on Loaded Trunk Cables and Methods Taken to Improve Them. (Digest of 58-214) 604
Specht, T. R.; L. B. Rademacher, H. R. Moore. Measurement of Iron and Copper Losses in Transformers. (Digest of 58-158) 402
Sreedharan, R.; H. V. Narayana Rao, M. R. Sitaram. Power for Mysore 1103-05
Stafford, R. L.; R. D. Camburn. Determination of Optimum Transmission Voltage. 700-03
Stearns, E. V.; D. B. De Bra. Attitude Control—III 1088-90
Steedley, J. F. Evaluation of Wiring Systems for the Pulp and Paper Industry .. 1110-13
Stein, W. A.; G. J. Thaler. Obtaining the Frequency Response Characteristics of a Nonlinear Servomechanism from an Amplitude and Frequency Sensitive Describing Function. (Digest of 58-84) 689
Straub, C. L.; H. G. Wiest. Metallic Rectifiers for Shipboard Electric Systems. (58-135) 312-16
Strom, A. P. Leakage-Flux Suppression in Magnetic Air Breakers. (Digest of 58-21) 517
Stys, Z. S. Large Gas Turbines for Central Station Application. (58-164) 238-43
Su, Kendall L. Component Current Method of Circuit Analysis 947-50
Sweezy, Ken. (Letter) Tesla Homeland Visited 116
Swinyard, W. O.; W. J. Morlock. Performance of UHF and VHF Transmitting and Receiving Equipment 226-31

T

Terry, P. V. New Printing Demand Meter. (Digest of 58-146) 485
Thaler, G. J.; W. A. Stein. Obtaining the Frequency Response Characteristics of a Nonlinear Servomechanism from an Amplitude and Frequency Sensitive Describing Function. (Digest of 58-84) 689
Tilson, R. L.; J. R. Hayden, J. E. Martin. A Protection Plan for Distribution Feeders. (Digest of 58-174) 1000
Town, G. R. The Television Allocations Study Organization 126-8
Travers, R. H.; D. B. Zelenka, H. A. List, C. Nichols. Evaluation of Combustion Control-Load Control Tie-In Equipment. (Digest of 58-168) 915
Truxal, J. G. (Letter) Soviet Co-operation. 476
Tuttle, P. D.; H. E. House. Current-Carrying Capacity of ACSR. (Digest of 58-41) ..719

U

Uhlig, E. R.; R. B. Kaufman, J. L. Pierce. The Effect of Transformer Oil Preservation Methods on the Dielectric Strength of Oil. (Digest of 57-1039) 65
Underkoffler, V. S.; R. G. Olson. Design Considerations in a Nuclear Safety Instrumentation System 1008-13

V

Van Dyke, W. C. Electrical Features of the Upper Raquette River Power Project. (Digest of 58-876) 1115
Van Ness, J. E.; S. T. Bow. Use of Phase Space in Transient Stability Studies. (Digest of 58-83) 601
Van Nimwegen, L.; P. H. Jeynes. The Criterion of Economic Choice. (Digest of 58-115) 626
Vandeland, R. N.; J. R. Martin, G. W. Warnick. Remote Control Carrier Systems in Two-Way Closed-Circuit Educational TV 804-06
Vernam, G. S. Automatic Telegraph Switching System Plan 55-A. (58-45) 418-23
Veysey, R. H. (Letter) Calder Hall 116

W

Waddington, P. W.; D. E. Jones. Coupling Methods for Power Line Carrier Systems. (Digest of 57-1093) 64
Wagner, C. F.; A. R. Hileman. The Lightning Stroke. (Digest of 58-24) 149
Waidelich, D. L.; R. G. Myers. A System for Gaging Plating Thickness. (Digest of 58-935) 815
Wallman, O. F. Nation-Wide Switching of Intertoll Trunks—Transmission Considerations. (Digest of 58-5) 237
Ware, P. H.; G. H. Hunt, M. J. Koulopoulos. Dielectric Strength and Voltage Life of Polyethylene. (Digest of 58-51) 681
Warnick, G. W.; J. R. Martin, R. N. Vandeland. Remote Control Carrier Systems in Two-Way Closed-Circuit Educational TV 804-06
Watson, T. J., Jr. Education and the Science Frontiers 823-5
Weber, Ernst. Knowledge Plus Wisdom .575-9
Weisner, L. E. Transistor Count-Rate Systems 623-5
Whitman, L. C. Insulation Aging in Pure Oxygen and in a Vacuum. (Digest of 58-119) 781
Widell, B. A. Railway Traction Equipment Ventilating Systems. (Digest of 58-507) 585
Wiest, H. G.; C. L. Straub. Metallic Rectifiers for Shipboard Electric Systems. (58-135) 312-16
Wilder, H. F. An Improved Six-Channel Time Division Multiplex for Submarine Cable Telegraphy. (Digest of 58-44) 707
Winitsky, L.; E. W. Scheirer. Cable Installations on Bridges. (Digest of 58-17) ..224
Wittibschlager, J. F.; C. J. Miller, Jr. Measurements of Steep-Front Impulse Waves with an Isolated Screen Room Installation. (Digest of 58-18) 507
Wollaston, F. O.; L. R. Horne. The Vancouver 230-Kv Oil-Filled Cables. (58-783) 816-21
World, R. W.; C. L. Rose, J. E. Skuderna. Relaying Tapped Substations for Faults on High-Voltage Transmission Lines. (Digest of 58-25) 621

Z

Zelenka, D. B.; R. H. Travers, H. A. List, C. Nichols. Evaluation of Combustion Control-Load Control Tie-In Equipment. (Digest of 58-168) 915
Zimmerman, Eric. (Letter) Earlier Prefabricated Substation 867

News Index

(Includes all items published in Institute Activities, Of Current Interest, and the Electrical Engineering Education Section.)

Acceleration Test, "Hot" or "Cold" Shoot Used in 989
ACE Day Scheduled by Ohio State University College of Engineering, Annual 328
Acknowledgment Cards for Amateur Radio Operators 771
(Aerojet-General Corp.) Static Firings Viewed from Blockhouses 469
AIEE and ASME Presidents to Speak on "Functional Plan" 453
AIEE Proposal, Texas Engineers Discuss ..457
Air Defense Sector, Headquarters for SAGE New York 1064
(Air Force) Cameras Pave Way for *F-101* Voodoo Speed Records 566
Air Force Contract Awarded to Case Institute 1046
(Air Force) Escape Velocity Exceeded in Wind Tunnel 570
(Air Force) Jet Engine Test Flight in ARDC Propulsion Wind Tunnel 467
(Air Force Jet) Major Scientific H-Bomb Defense Advance 272
(Air Force) Long-Range Ballistic Missiles Photographed by New Optical System 109
(Air Force) Pressure Conditions 95 Miles Up Simulated 112
Air Locks in Nuclear Domes 860
(Air Pollution) Model Studies Save Money in Designing of Flues 465
(Air Traffic) Monitor for Jet Age Traffic .473
(Airborne Early Warning) Trailerized AEW Simulator Trains Crews Safely on Ground 992
(Aircraft) Automatic Landing System Successfully Lands Navaho *X-10* 115
(Aircraft) Cockpit Screen Shows Plane's Position 860
Aircraft, Flight Operations Center Aids Army Tactical 865
(Aircraft) READ System Increases Radar Range 663
Aircraft Running Lights Identified for Moon Watchers 471
(Aircraft) Ultraprecise Compass for *DC-8* Ocean and Polar Flights 568
Airplane Designed, Experimental Radar Research 662
(Airport) Fluorescent Strip System Spreads Carpet of Light for Landings 652
Airways Modernization Board Selects Site for Experimental Center 661
(Alaska) "White Alice" Network in Operation 565
Aluminum Showcase, Automatic Sun Louvers Feature of 990

Amateur Radio Operators, Acknowledgment Cards for 771
American Automatic Control Council Officers 749
American Institute of Chemical Engineers:
AIChE Inducted as Founder Society. (Photo) 634
Golden Jubilee Year 375
Heat Transfer Conference at Chicago, August 18-20 856
American Institute of Mining, Metallurgical, and Petroleum Engineers:
Announces Election of Officers 1157
American Institute of Physics:
AIP Program Aims to Improve Physics Teaching 184
American Medical Association Meeting, X-ray Viewer Demonstrated at 371
American Nuclear Society President Elected at Annual Meeting 1072
American Power Conference:
Program, Tentative 262
Session on Extra High Voltage (Photo). 534
To be Held March 26-28, 1958 in Chicago 262
American Society for Engineering Education:
AEC/ASEE Summer Institutes on Nuclear Energy 332
College-Industry Conference to be Held January 30-31, 1958 at the University of Michigan 100
Electrical Division Meeting at Berkeley, Calif. 551
Officer Discusses Need for Engineering Teachers 963
Plan for Increasing Number of Engineering Teachers 333
Reports on Engineering Enrollment and Faculty Requirements 642
Reports on Research in Engineering Colleges 431
Survey of Engineering Enrollment 434
American Society for Testing Materials:
Purdue Professor Elected President of ASTM 964
American Standards Association:
AIEE Acts as Sponsor of ASA Project 850
AIEE and NEMA Sponsor New ASA Sectional Committees 847
American Viscose Program of Aid-to-Education, 1958-59 440
American Welding Society:
President Elected 660
(Amphibious) USMC Tests Radio-Controlled LVT 864
Amplifier Extends Range of Radio Telescopes 191
Amplifier, Fast-Wave Parametric 1071
Amplifier, Field Effect Transistor 771
Amplifier Permits Room-Light Viewing, X-Ray 993
Analog Computations Conference, International 474
Annual Meeting 454
Antarctic Climate, Clues to 375
Antenna Developed, Wrap-Around 857
Antenna Research at Ohio State University 1129
Antioch College, New General Engineering Program at 185
Apprentice Training Lags in U.S., Technical 476
(Argonne) EBWR Simulator 1072
Argonne International School, Sixth Session Under Way at 436
(Argonne National Lab.) Nuclear Energy Courses for High School Teachers 251
Argonne National Laboratory, Projects Planned for 473
(Army) Conference on Electronic Failure Report 772
(Army) Developments in Missiles and Helicopters 771
Army Message Printer Device Is First Supersped Combat Unit 766
Army Revealed, Developments of U.S. 196
Army Signal Corps 98th Anniversary Celebration 658
(Army) Space Sentry Aids Explorer Satellite Tracking 378
Army Tactical Aircraft, Flight Operations Center Aids 865
(Army's Explorer Satellite) Details Revealed on Nose Cone and Space 770
Articles, Requirements for Authors and Publication Rights for AIEE Papers and 737
Aruba Distillation Plant, Sea to Fresh Water at 861
Asia Foundation Seeks Books for Asian Students 83
Associated Midwest Universities Formed 965
Astronomical Observatory, Kitt Peak Site of New 475
Atlas Missile, Engine Cluster Propels 1154
(Atom Fair) Harmonic Drive Principle Demonstrated 200
Atom-Fueled *N. S. Savannah* Merchant Ship To Sail in 1960 108
Atomic Age Physics, Televised Course in 1040
Atomic Clock for Space Travelers' Use 571
Atomic Energy Agency, International—Program and Budget Established 279
Atomic Energy Commission:
Atomic Energy Progress Summarized 472
Grants to Aid Nuclear Technology Training 954
Exhibit—"This Atomic World" 943
Fifty Five Grants Awarded by AEC 252
Foreign and Domestic Reports 664
Gamma Irradiation Service Discontinued. 379
List of Publications and Releases 1158
New Radiation Exposure Limits Adopted 194
Notes and Developments 863, 1069
Summer Institutes on Nuclear Energy, AEC/ASEE 332
"This Atomic World" To Visit Schools in 15 States 1133
U.S. and British Controlled Fusion Research 374
Atomic Energy Conference Papers Titles, Additional 567
Atomic Energy Developments, AEC and UN 197
Atomic Energy Exposition at Union College 187
Atomic Energy, Increasing Interest Shown in 960
Atomic Nucleus Together?, What Holds the 659
Atomic Reactor Demonstration Housed at Franklin Institute 185
Atomic Reactor for Educational Purposes, Canada's First Subcritical 99
Atomic Submarine, Instrumentation System for Prototype 766
Atoms Used for Sterilizing Sutures 377
Author of a Conference Paper, Manuscriot Guide for the 736
Author of a Transactions Paper, Manuscriot Guide for the 736
Authors and Publication Rights for AIEE Papers and Articles, Requirements for 737
Automated Warehouse, "Ferris Wheel" in 1156
Automatic Control, Intensive Course in 332
Automatic Data Processing, University Institute on 1072
Automation Exposition, 4th International .663
Automation Featured in Motor and Generator Manufacture 277
(Automation) Hotel Reservations Made in Seconds 199
Automation Techniques, Film Explores .1155
Automobile, Electric Cable Steers 378
Automobile Safety Features Electronic Controls 863

AWARDS (Includes Medals, Citations, Fellowships, Scholarships, and Prizes):
AEC Fellowships in Industrial Hygiene .189
AEC Fellowships in Nuclear Science and Engineering 1132
AEC Graduate Fellowship Program Broadened 102
AIEE Medal in Electrical Engineering Education, Dr. Calvert Awarded 976
American Nuclear Society Annual Graduate Student Award 958
Anchor Metals to Award Annual College Scholarship 559
ASHAE Award, Professor G. L. Tuve Receives 330
Awards and Appointments 278
Bell Telephone Laboratories Announces Fellowship Winners 557
Civil Engineering Scholarship Program Announced, Armco 100
d'Humy Award, Two AIEE Members Receive 1957 90
d'Humy Medal, W. D. Cannon Receives 1958 F. E. 1141
District No. 3 Prize Paper Contest 951
District No. 8 Prize Paper Winners. (Photo) 953
District No. 4 Student Paper Contest. (Photo) 952
District No. 7 Student Paper Contest, AIEE 952
District No. 11 Student Paper Competition 953
Eastman Kodak Program of Aid to High Education—Fellowships Listed 103
Edison Medal for 1957 Awarded to J. K. Hodnette 86
Electrical Engineering Education, Nominations Invited for 1958 Medal in 175
Electronic Scholarship, Companies Announce 550
Engineering Awards Made by Lincoln Foundation 105
Fellowship Program, OAS Announces ..435
Fellowships Available in Traffic Engineering 186
Fellowships Awarded by AEC 558
Fellowships in Radiological Physics, Special 104
Fortescue Fellowship Applicants Must File by February 15 89
Fortescue Fellowship Award Announced for 1958-59 528
General Electric Fellowship Grants 101
Hoover Medal Presented. (Photo) 452
Hughes Aircraft, Staff Fellowships at ..1150
Hughes Fellowships Awarded, Howard .960
Hughes Fellowships Awarded to 51 AIEE Student Members 956
John Fritz Medal for 1958, J. R. Suman To Receive 85
John Fritz Medal for 1959 to be Awarded to Dr. M. J. Kelly 979
John Fritz Medal Presented. (Photo) ..452
Lamme Medal for 1957 Awarded to Dr. H. S. Black 453
Lamme Medal 1958 Nominations Due December 1 ..... 531, 848
Lamme Scholarship, Westinghouse Engineer Awarded 963
Lincoln Foundation Announces Design Competition 189
Marston Medal, A. Q. Adamson Named Winner of 747
National Electronics Conference Fellowship Awarded to W. R. Minck 552
National Reliability Award, G. C. Neuschaefer Receives 170
National Science Foundation Fellowship Awarded to Prof. Middendorf 551
National Science Foundation Graduate and Postdoctoral Fellowships 1130
New York University Prize Paper Winners 951
Niels Bohr International Gold Medal Awarded 976
NSPE Award, Engineering Educator Receives 1958 964
Philip Sporn Fellowship Available 433
Prize Rules for AIEE Papers 87, 834
RCA Grants Fellowships to 9 Graduate Students 254
Research Corporation Award, Columbia Professor Wins 332
RWMA Sponsors Paper Competition 566
Scholarship Awarded by Anchor Metals, Inc., First Engineering 968
Scholarship Awards Made by Dow Corning Corporation 105
Scholarship Fund for Japanese Students 331
Scholarship Honors Dean Ovid W. Eshbach 959
Scholarship Program, NSPE Nationwide 249
Scholarship, Voice of Democracy Winner to Receive $1,500 1045
Scholarships at Pratt, Alumnus Establishes 186
Stromberg-Carlson Scholarship Winners Named 966
Student Paper Competition, Cincinnati Section Holds 962
Student Paper Contest, Minnesota Section 1133
Student Paper Winners at Summer Meeting 950
Student Papers Competition, Results of the District 749, 950
Student Winner, John Lauder, Wins First Place in Student Paper Competition. (Photo) 641
U.S. Government Awards Under Fulbright Act for 1959-60 752
Voice of Democracy Winner Is To Receive $1,500 Scholarship 1045
Walker, Dr. E. A., Receives Award from Dept. of the Navy 1130
Washington Award for 1958, Ben Morecll Receives 638
Westinghouse Educational Foundation Announces Awards 963
Wheelabrator Fellowship, Booklet Describes 557

B

B-58 Supersonic Reconnaissance Bomber, Control System for 464
Ballistic Missiles Problems, Research Tool for 370
Barrett, W. J., Unveils Bust of Westinghouse for Hall of Fame, AIEE President ... 168
Battelle Institute Names New President .. 373
Batteries Used in U.S. Satellites, Mercury 858
Battery, Unique Lead-Silver Rechargeable Dry 111
Belgium, BR 2 Nuclear Reactor Is Constructed in 655
Bibber, H. W., to Serve on EJC Committee 434
Bill Changer for Vending Machines 199
Bimonthly Publications 70, 169, 264, 351, 443, 533, 756, 833, 979, 1052, 1135
Bimonthly Publications and Transactions, Increased Prices for Subscriptions to 632
Board of Directors, Summary of the Report of the 740-3
Bomber, Control System for *B-58* Supersonic Reconnaissance 464
Boulder Laboratories, Science Fair to be Held at NBS 188
Bridge Has a Maintained Illumination of 1.0 Footcandle for Night Safety, Mackinac 855
(Brookhaven National Lab.) Cosmotron Cooled by Special Chiller 1150
(Brookhaven National Lab.) Hot Laboratories Division Solicits Conference Abstracts 566, 656
(Brussels World's Fair) Dramatic Lighting for Central Sphere of Atomium 568
Brussels World's Fair, Giant Snowflakes for 376
Building, New Engineering (See United Engineering Center)
(Burndy Library) Mystery Man Needs Identification 377
Burroughs *205* Digital Computers, Two Universities Install 962
Bylaw Amendments in Effect, Announcement of 347

C

Caltech Students Receive Fulbright Grants 968
Camera Detects Intense Radiation 372
Cameras Pave Way for *F-101* Voodoo Speed Records 566
Canada's First Subcritical Atomic Reactor for Educational Purposes 99
Canadian Sectional Meeting of the World Power Conference 745
Cancer Treatment, Radiation Device for .. 469
Career Forum, President Eisenhower Praises AIEE 169
Career Program Aids in Scientist Recruitment, Summer 329
Carnegie Professor Awarded Late Patent for Radar Device 250
Carnegie, Summer Course in Scientific Russian at 558
Case Institute, Air Force Contract Awarded to 1046
Case Institute of Technology, Microwave Course at 554
Case Institute, Short Course in Operations Research at 439
Casting of Tough Pitch Copper Cakes, Continuous 470
Catholic University Appoints Research Coordinator 1045
Certificates and Diplomas Now Available, AIEE 837
Checkout, Mobile Units for Missile 374
Chemical Coating to Halt Evaporation ... 772
Chemical Data on Substances, Spectroanalyzer Obtains Rapid 560
Chemical Engineers Celebrate Jubilee Year 570
(CIE) United States National Committee of Commission Internationale de l'Eclairage 444
CIGRE Holds 7th Meeting in Paris, France, June 4-14, 1958 843
CIGRE Officers for 1958 Announced 531
Civil Aeronautics Administration:
Flight Efficiency and Safety Measures .. 862
Civil Engineering Effective, New Teaching Method for 1045
Clemson Establishes Student Broadcasting System 436
Clemson, Graduate Study Program in Nuclear Science at 439
Clemson, Ground Breaking Ceremonies for Engineering Building at 1130
Cleveland Electronics Conference, Annual .172
Clocks, Sputniks, and Primary Standards .275
Closed-Circuit Television at the New York Trade School 556
Coal Unloader to Serve Electric Power Plant, Twin 1070
Cockpit Screen Shows Plane's Position ... 860
Coinage Advances in Step with Technology 768
Coliseum, World Trade at New York 664
College-Industry Conference to be Held by ASEE 100
Colleges, ASEE Reports on Research in Engineering 431
Colleges To Get Reactor Simulators 557
Colorado School of Mines, Contribution Made to 103
Colorado School of Mines "Mineral Industries Bulletin" 440
Columbia Professor Honored by the "Great Teacher Award" 253
Columbia to Encourage Two-Year Ph.D., New Program at 329
(Columbia University) Chemical Coating to Halt Evaporation 772
Columbia University Faculty, Dr. Schelkunoff Joins 965
(Commercial Building) Diagonal Design for Electric Systems 861

COMMITTEE ACTIVITIES:
Air Transportation Outlines Work of Subcommittees 91
Data Communication Reports 175
Electronic and High Frequency Instruments To Publish Specifications for Electronic Instruments 269
Induction Machinery and Relays Continues Study Relating to Motor Protection, Stray Load Loss Tests and Insulation 756
Industrial Power Rectifiers Discusses Standards 91
Industrial Power Systems To Revise Interior Wiring Designs for Commercial Buildings 175
Insulated Conductors Committee Studies Materials 530
Insulated Conductors, News of 647
Land Transportation Reports on IEC Activities 269
Magnetic Amplifiers Reports 92
Marine Transportation, News of 646
Nucleonics Discusses Conference 92
Power System Communication Discusses Activities 91
Rotating Machinery Committee, Reports by Subcommittees of 454
Safety Committee Message "Electrical Safety Is Applied Intelligence" 643
Solid-State Devices Contributes Test Code for Transistors 177
Special Instruments and Auxiliary Apparatus Discusses Subcommittees 91
Switchgear Reports on its Standardization Activities 357
Transformers Subcommittees Report ... 176
Transmission and Distribution Discusses Activities 269
Committees for 1958-59, AIEE Officers, Departments and 870
(Commonwealth Edison Co.) Nuclear Power Station Is Located in Chicago Area .. 367
Compass for *DC-8* Ocean and Polar Flights, Ultraprecise 368
Compound Exhibits Ferromagnetic Properties 994
Computer and Electrical Systems at University of Vermont May 15, Symposium on .. 452
Computer, Dead Sea Scrolls Indexed by .. 561
(Computer) High Speed Memory Unit Uses Superconductivity Principle 116
(Computer) Major Scientific H-Bomb Defense Advance 272
Computer to Antioch College, National Cash Register Company Presents 104
(Computer) WISC at Work on Wisconsin Campus 250
Computers and Basic Research 199
Computers Simulate and Test Television and Speech Research Devices, Digital 1068
Computers, Two Universities Install Burroughs *205* Digital 962
Conelrad, Weather Warnings to be Broadcast by 472
Conference, Annual Cleveland Electronics .172
Conference at Chicago, August 18-20, Heat Transfer 856
Conference at Louisiana Polytechnic Institute, Instrumentation 1044
Conference on Electrical Connections, Schedule 665
Conference on Information Processing, International 755
Conference on Utilization of Scientists and Engineers 554
Conference Paper, Manuscript Guide for the Author of a 736
Conference Papers Open for Discussion 92, 174, 267, 338, 360, 456, 535, 659, 751, 836, 984, 1050, 1139

CONFERENCES, TECHNICAL:
Appliance Technical Conference (AIEE) (1958):
Program, Tentative 355
To Be Held in Chicago, May 26-27, 1958 355
Automatic Optimization Conference (AIEE/ASME/IRE/ISA/AIChE)
Program Listed 268
To Be Held in Newark, Del., April 2-4 .. 89
Automatic Techniques Conference (AIEE/IRE/ACM) (1958):
Committee Members and Banquet Speaker. (Photo) 635
First Joint Conference Held 634
To be Held in Detroit, April 14-16 ..... 266, 355
Program, Tentative 355
Communications, 2nd National Symposium On Global. (AIEE/IRE), (1958):
Florida's Gulf Coast Selected for Symposium to be Held December 3-5 1057
Computer Conference, (Eastern Joint) (AIEE/IRE/ACM) (1958):
Program Announced, Tentative 1136
To Be Held December 3-5 in Philadelphia 1136
Computer Conference (Western) (AIEE/IRE/ACM) (1958):
Attendance Over 1800 748
Program, Tentative 449
To Be Held in Los Angeles, May 6-8 .. 267
Computer Conference (Western) (AIEE/IRE/ACM) (1959):
Committee Heads Named 1056
To Be Held in San Francisco March 3-5, 1959 845
Computers in Control Systems (AIEE/IRE/ACM) (1957):
Attendance Totalled 376 171
Held October 15-18, 1957 in Atlantic City, N.J. 171
Electrical and Radio Standards Conference (AIEE/IRE/NBS) (1958):
Program, Tentative 746
To Be Held in Boulder, Colo., August 13-15 ..... 456, 528
Electrical Insulation Conference (AIEE/NEMA) (1958):
Conference Held in Cleveland 1054
To Be Held in Cleveland, September 3-5, 1958 ..... 750, 838
Electrical Techniques in Medicine and Biology (AIEE/IRE/ISA) (1958):
To Be Held in Minneapolis, November 19-21, 1958 846
Electronics Components Conference (AIEE/IRE/EIA/WCEMA) (1958):
To Be Held April 22-24 in Los Angeles 257
Electronic Components Conference (AIEE/IRE/EIA/WCEMA) (1959):
Call for Technical Papers 976
To Be Held in Philadelphia, May 6-8 .. 976
Machine Tool Conference (1957):
Officers of 9th Annual Conference. (Photo) 268
Machine Tool Conference (1958):
10th Conference To Be Held in Hartford, Conn., October 13-15 978
Magnetism and Magnetic Materials (AIEE/APS/IRE) (1958):
To Be Held in Philadelphia November 17-20, 1958 528
Management Conference (AIEE/IRE) (1958):
Engineers Inspect Arthur D. Little Plant. (Photo) 533
Program Listed 265
To Be Held in Boston, Mass., March 19-20, 1958 265
Materials Handling Conference (AIEE) (1958):
Monongahela River Inspection Trip. (Photo) 844
Monteith, A. C., Addresses Conference. (Photo) 755
National Electrical Insulation Conference (AIEE/NEMA) (1958):

To Be Held September 3-5, 1958 in Cleveland 632
National Power Conference (AIEE/ASME) (1958):
Attendance Over 900 1136
Committee, Members of the Arrangements. (Photo) 972
Program, Tentative Technical 753
To Be Held in Boston, September 29-October 1 532
Nonlinear Magnetics and Magnetic Amplifiers Conference (AIEE/IRE) (1958):
Program, Tentative 738
To Be Held in Los Angeles, August 6-8 454
Petroleum Industry Conference (1958):
Conference Committee. (Photo) 532
To Be Held September 15-17 in Dallas, Texas; Program Listed 748
Power Industry Computer Applications Conference (AIEE) (1958):
To Be Held September 15-17, 1958 in Toronto 848
Pulp and Paper Industry Conference. (1958):
Attendance Totalled 125 529
To Be Held March 27-28 at North Carolina State College 266
Pulp and Paper Industry Conference. (1959):
To Be Held June 18-19 at the University of Maine, Orono 979
Railroad Conference (AIEE/ASME) (1958):
Program, Tentative 356
To Be Held in Cleveland, April 9-10 356
Rubber and Plastics Conference (AIEE) (1958):
Program, Tentative 356
Rubber and Plastics Subcommittee. (Photo) 645
To Be Held April 14-15, 1958, in Akron 356
Solid-State Circuits Conference (AIEE/IRE) (1959):
Call for Papers—Conference To Be Held February 12-13 in Philadelphia 848
Telemetering Conference (AIEE/ARS/ISA/IAS) (1958):
Aberdeen Proving Ground Ballistic Research Lab Mach 5 (Photo) 443
Attendance Totaled 625 735
Martin Company. (Photo) 442
TALOS—A Surface-to-Air Guided Missile. (Photo) 441
To Be Held June 2-4, in Baltimore 357, 441
Program, Tentative 442
Textile Conference (AIEE) (1957):
Attendance Totalled 226 172
Held at North Carolina State College November 14-15, 1957 172
Control System for *B-58* Supersonic Reconnaissance Bomber 464
Control System Provides for Lower Costs ..567
Controller for Phase-Equilibrium Studies ..858
Converter, Efficiency Noted in Heat-to-Electricity 273
Copper Cakes, Continuous Casting of Tough Pitch 470
Cooling Electronic Equipment, Improved Method of 113
Cooper Union Aided by Electrical Industry Committee 184
Cooper Union, New School of Engineering Building for 958
Co-operative Education, Nation-Wide Study of 1131
Coover, M. S., Receives Plaque from AIEE 176
Cornell Students to Study Vacuum Metallurgy at First-Hand 962
Cort, Stewart J., Fund at Lehigh University, $35,000 Gift Establishes 334
Cosmotron Cooled by Special Chiller 1150
Counting System, Transistorized 376
Crago, R. P., Chosen Outstanding Young Engineer 84
Crystal for Rectifier Production, Cutting Silicon 770
Crystalline Material, High Strength in 566
Crystalline "Whiskers," Metals Sprout 866
Crystals Grown Without Dislocations, Silicon 1156
Crystals May Explain Steel Failure, Strange 112
Current Measured by Scientists, Subsurface 866
Currents, Analyze Data on Deep Sea 663
Curtiss-Wright To Conduct Solar Research, NYU and 1129
Cutting Silicon Crystal for Rectifier Production 770

D

Dalziel, C. F., AIEE Fellow Honored 359
Data-Processing Systems, All-Transistor ..660
DC-8 Ocean and Polar Flights, Ultraprecise Compass for 368
Decay Advanced, Research in Neutron 656
Decay Flouts "Parity Conservation" Law, Radioactive Neutron 110
Defense Advance, Major Scientific H-Bomb 272
Degrees in Science and Engineering, Increase in 555
Departments and Committees for 1958-59, AIEE Officers 870
Detective Protects Shopping Center, Electronic 1072
Developer, Portable Complete Automatic Film 373
Diagonal Design for Electric Systems 861
Diodes in High-Volume Production, Fast Recovery Silicon 463
Diplomas and Certificates Now Available, AIEE 837
District No. 13 Officers, AIEE. (Photo) ..734
District Papers Are Now Available, Additional 756
Doctoral Program in Engineering Mechanics Offered 328
Dow Corning Corporation, Scholarship Awards Made by 105
(Dow Corning) Silicone-Insulated Motor Exposed to Radiation Source 274
Dresden Nuclear Power Station Is Located in Chicago Area 367
Dudley Observatory First To Offer Public Membership 553
Du Pont Program of Aid to Education ..250

E

EBWR Blade Failure, Inspection Yields Cause of 1151
EBWR Simulator 1072
Education and Industry Units to Plan Engineering Program 966
Education, Du Pont Program of Aid to ..250
Education, Record Aids Program of Scientific 252
Education, String Models Effective as Visual Aids in 1129
Educational Purposes, Canada's First Subcritical Atomic Reactor for 99
Eisenhower Praises AIEE Career Forum, President 160
Electric Cable Steers Automobile 378
Electric Power Field, Engineering Careers in the 250
Electric Systems, Diagonal Design for 861
Electrical Connections, Schedule Conference on 665
Electrical Engineer in Education, An:
Bewley, L. V. 185
Miller, W. J. 433
Seeley, W. J. 955
Electrical Engineer in Industry, An:
Friedrich 1040
Hummel 527
Oetting 251
Robertson 101
Stevens 551
Walter 1131
Electrical Engineer, Search Started for Outstanding 544
Electrical Engineers in Demand at Lehigh University 964
"Electrical Power Distribution for Industrial Plants"—Section Study Groups Based on AIEE Red Book 751
Electricity Research, Cost-Competitive Nuclear 992
Electrolytic Tinning by Controlled Operation of Processes 987
Electron Tube Works after Explosion 369
Electronic Controls, Automobile Safety Features 863
Electronic Detective Protects Shopping Center 1072
Electronic Device Aids Delicate Eye Operation 197
Electronic Devices, Medical Aids through 866
Electronic Equipment, Improved Method of Cooling 113
Electronic Failure Report, Conference on ..772
Electronic Highway of Tomorrow in Operation 654
Electronic Impulses Converted to Printed Words 865
Electronic Speed without Human Help, System Corrects Errors at 767
Electronic Vehicle Control, Nebraska Pioneers 200
Electronics in Scientific Research 1153
Emanueli, Luigi, Named Honorary Member of the Institute 1050
Engineering Careers in the Electric Power Field 250
Engineering Faculty Appointments, Recent 554, 1044
Engineering Foundation:
Grants Advance 26 Projects 740
Engineering Inaugurated, Off-Campus Program in 1044
Engineering Institute of Canada:
Appoints New General Secretary 753
Releases Survey of Engineering Registration 188
Engineering Manpower Commission:
Engineering and Scientific Education in the United Kingdom 104
EMC-SMC Forecast of Engineering Graduates 1046
Reports on 1958 Engineering Graduates 932
Engineering Mechanics Offered, Doctoral Program in 328
Engineering Research Institute Becomes University of Michigan Research Institute 960
Engineering Societies Library:
Notes Increase in Demand for Russian Material 171
Engineering Societies Secretaries Meet in Cleveland 647
Engineering Societies Personnel Service:
Federal Approval of ESPS Job Recruitment 848
Engineering Title Standards Proposed by NSPE 368
Engineers' Council for Professional Development:
"Do I Have Engineering Aptitude?" ..555
Guidance—The Engineer's Responsibility An Appeal to Members of AIEE from ECPD 451
Hermes, R. M., Appointed to Accreditation Committee 1038
Holds 26th Annual Meeting—And Election of Officers 1140
Joint Assembly and 25th Annual Meeting 80
Publishes 25th Annual Report 356
Engineers Joint Council:
EJC President Discusses U.S. Technological Situation 267
Incorporation of Engineers Joint Council 1057
Issues Annual Report for 1957 534
Joint Assembly and 25th Annual Meeting 80
Now Includes 17 Members 644
Tax Deductions Incurred in Society Activities 172
Union College Professor to Serve on EJC Committee 434
"Engineers' Week" at University of Louisville 555
Engineers' Week, Leading Figures Sponsor National 166
Engineers (Women). Photo of the First Two in Southern Bell History 104
Equilibrium Studies, Controller for 858
Errors at Electronic Speed without Human Help, System Corrects 767
Escape Velocity Exceeded in Wind Tunnel 570
Esso Grant for Research, Rutgers Receives 963
Eta Kappa Nu:
Crago, R. P., Chosen Outstanding Young Engineer 84
Members of the Eta Kappa NU Jury of Award. (Photo) 84
New President Elected 1046
Outstanding Young Engineers Are Honored 1141
Raffone, J. J., Named Editor of Eta Kappa Nu "Bridge" 90
Search Started for Outstanding Electrical Engineer 544
Young Electrical Engineers Honored at Eta Kappa Nu Awards Dinner 352
EUSEC Meets in New York April 28-May 2, 1958 638
Examination Machine, Professor Envisions Electrical 559
Exchange Program Marks 10th Year, United States 437
Exhibition, International Inventor's 276

Explosive Charge Forms Jet Trainer Fuel Tanks, High 1151
Eye Operation, Electronic Device Aids Delicate 197

F

Faculty Appointments, Recent Engineering 554, 1044
Failure Report, Conference on Electronic .. 772
Fast-Wave Parametric Amplifier 1071
Federal Space Exploration Commission .. 568
Fellow Diploma Presented to F. T. Bear, (Photo) 641
Fellow Diploma Presented to G. W. Bean (Photo) 646
Fellow Diploma Presented to L. R. Sellers, (Photo) 1146
Fellow Diploma Presented to P. H. Robinson, (Photo) 980
Fenn College Accelerated, Construction Program at 438
"Ferris Wheel" in Automated Warehouse 1156
Ferromagnetic Properties, Compound Exhibits 994
FIER Awards Grant to New Stanford Research Laboratory 252
Film Developer, Portable Completely Automatic 575
Film Explores Automation Techniques .. 1155
Film Programs Available, New Sound-Slide 332
Flight Operations Center Aids Army Tactical Aircraft 865
Flues, Model Studies Save Money in Designing of 465
Fluorescent Strip Stream Spreads Carpet of Light for Landings 652
(Flying Saucer) Experimental Radar Research Plane Designed 662
Foam Is High-Temperature Insulation, Pure Silica 854
(Ford Instrument) Electronic Device Aids Delicate Eye Operation 197
Fountain of Lights On in Rockefeller Center 860
Franklin Institute, Engineers Honored by The 1148
Franklin Institute, Reactor Demonstration House at 185
Fresh Water at Aruba Distillation Plant, Seat to 861
Fuel, Motors Operate in High-Octane .. 376
Fulbright Grants, Caltech Students Receive 968
"Functional Plan", AIEE and ASHME Presidents to Speak on 453
Furnace Tracking Sun, Heliostat Keeps .. 989
Fusion Research, U. S. and British Controlled 374

G

Gas Companies Gift to Tufts 254
General Electric Company:
Automation Featured in Motor and Generator Manufacture 277
Efficiency Noted in Heat-to-Electricity Converter 273
Fellowship Grants 101
Mobile Units for Missile Checkout 574
Phosphor Coated Transparent Tube Developed 366
Power Transformers with Low Sound Enclosures 113
(General Motors) Electric Cable Steers Automobile 378
(General Motors) Improved Safe Highway Travel 571
Generator Manufacture, Automation Featured in Motor and 277
Georgia Tech's Radioisotopes and Bioengineering Laboratory 557
Germanium Resistance Thermometer 660
(Germany) University of Frankfurt Nuclear Research Reactor 254
Giant Step Into Space 986
Gordon Research Conferences for 1958 .. 438
Graduate Summer Session in Statistics, Southern Regional 350
Graduates, EMC-SMC Forecast of Engineering 1048
"Grasshopper" Transmits Weather Automatically 857
Guidance—The Engineer's Responsibility—An Appeal to Members of AIEE from ECPD 451
Guide for the Author of a Conference Paper, Manuscript 736
Guide for the Author of a Transactions Paper, Manuscript 736
Gyroscope Accuracy, Advance in 471

H

H-Bomb Defense Advance, Major Scientific 272
Hands Developed, Artificial Muscle for Paralyzed 475
Handwritten Numerals, Machine "Reads" 369
Harmonic Drive Principle Demonstrated .. 200
Harvard, Full-Year Course in Russian at .. 554
Harvard–Guggenheim Center for Aviation Health and Safety 103
Harvard School of Public Health, Rockefeller Grant for 189
Head Lamp Alignment for Production Line Use 662
Heart Sound Pickup Detects Inaudible Murmur 372
Heat-to-Electricity Converter, Efficiency Noted in 275
Helicopter Erects Power Line Transmission Tower 468
Helicopters, Developments in Missiles and 771
Heliostat Keeps Furnace Tracking Sun ... 989
High School Teachers, Nuclear Energy Courses for 250
High Voltage Laboratory Dedicated to F. O. McMillan 957
High-Voltage Research Laboratory, Netherlands Opens 1071
Highway of Tomorrow in Operation, Electronic 654
Highway Travel, Improved Safe 571
History Book, Automated 378
History of Technology, Society for the .. 659
Honorary Member of the Institute, Luigi Emanueli Named 1050
Honorary Science Award Program Marks 25th Anniversary 967
Hot Laboratories Division Solicits Conference Abstracts 566, 656
Hotel Reservations Made in Seconds 199
(Hughes Aircraft Co.) Fast Recovery Silicon Diodes in High-Volume Production .. 463
(Hughes Aircraft) Major Scientific H-Bomb Defense Advance 272

I

IEE Presents Commemorative Books, British 747
IEE Publications, No Price Change for .. 1144
Illinois Institute of Technology:
Receives Grant for Faculty Development 432
Reports on Engineering Graduates' Salaries 958
(Illuminating Engineering Society) Device Determines Lighting Requirements .. 654
Illumination of 1.0 Footcandle for Night Safety, Mackinac Bridge Has a Maintained 855
Illumination with Pastel "Floating Panels," Greater 1158
India Invests in Nuclear Energy Power .. 863
Indoor Electrical Substation, Install 656
Indoor Electronic Train Pulls 10-Ton Load 664
Industrial Engineering, Intensive Courses in 440
Industry and Education Unite To Plan Engineering Program 966
Industry–Education Advisory Council. (Photo) 968
Information Processing, International Conference on 755
Institute of Radio Engineers:
Plans Summer Seminar 773
Space Flight at 2 Million Miles an Hour 663
Instrumentation System for Prototype Atomic Submarine 766
Insulated Motor Exposed to Radiation Source, Silicone 274
Insulation for Open-Type Motors, Improve 993
Insulation, Pure Silica Foam Is High Temperature 854
International Analog Computations Conference 474
International Business Machines Corp.:
Automated History Book 378
Dead Sea Scrolls Indexed by Computer .. 561
International Conference on Information Processing 755
International Federation of Automatic Control Starts Work 644
International Geophysical Year:
Amateur Astronomer Accompanied IGY Expedition 1154
Clues to Antarctic Climate 375
Notes on Arctic IGY Research Team .. 569
International Meetings of Interest to Engineers 531
(ITT) Spectroanalyzer Obtains Rapid Chemical Data on Substances 560
Inventor's Exhibition, International 276
Iowa State College, New Teaching Reactor for 965
Israel Engineers Plan World Assembly ... 372

J

Jet Age Traffic, Monitor for 473
Jet Engine Test Flight in ARDC Propulsion Wind Tunnel 467
Jet Trainer Fuel Tanks, High-Explosive Charge Forms 1151
Junior Engineers' and Scientists' Summer Institute Aids Students in Choosing Future Careers 100
Jupiter IRBM Made by Tracking, Radiometric Measurements of 852

K

Kidder, A. H., Addresses MSPE Meeting .. 525
Kitt Peak Site of New Astronomical Observatory 475
(Klystron Oscillator) Electron Tube Works Explosion 369

L

Laminated Bits To Gather Satellite Weather Information 196
Lamp Alignment for Production Line Use, Head 662
Landing System Successfully Lands Navaho X-10, Automatic 115
Lead–Silver Rechargeable Dry Battery, Unique 111
Lehigh New Training Tool, Power Network Analyzer Gives 967
Lehigh University, Electrical Engineers in Demand at 964
Lehigh University, Graduate Enrollment Up 25% at 105
Lehigh University, $35,000 Gift Establishes Cort Fund at 334
Light for Landings, Fluorescent Strip System Device Spreads Carpet of 652
Lighting for Central Sphere of Atomium, Dramatic 568
Lighting Requirements, Device Determines 654
Lights Identified for Moon Watchers, Aircraft Running 471
Lights On in Rockefeller Center, Fountain of 860
Lincoln Foundation, Engineering Awards Made by 105
Linden Station Generates 450,000 Kw 656
Liquid Propellant Rocket Engine for Redstone 190
Literature, Engineering .. 117, 201, 280, 380, 476, 572, 667, 774, 867, 995, 1074, 1160
Lost Uninhabited World Soon To Have Steel Mill, Power Dam, and 100,000 People 764
Loudspeaker "Throat," Student Develops New 252
Louisiana Polytechnic Institute, Instrumentation Conference at 1044
Lowell Tech, Engineering Physics Program at 1128
Lowell Technological Institute, Advisory Committee on Nuclear Engineering at 440
Lowell Technological Institute Engineering Division, Dr. Mingins Named Head of 253
Lowell Tech Library Receives Engineering Books 963
Luigi Emanueli Named Honorary Member of the Institute 1050
LVT, USMC Tests Radio-Controlled 864

M

MKS Symbols for Magnetic Materials and Catalogs 436
(Macagua Dam) Lost Uninhabited World Soon to Have Steel Mill, Power Dam, and 100,000 People 764
Machine "Reads" Handwritten Numerals. 369
Machines, Bill Changer for Vending ... 199
Mackinac Bridge Has a Maintained Illumination of 1.0 Footcandle for Night Safety 855
Magnetic Forces, Method Developed for Measuring 994
Magnetic Materials and Catalogs, MKS Symbols for 436
Magnetic Oxides, Transparent 371
Magnetic Steel, Scientists Develop "Four-Way" 106
Managers Set, Short Course for Engineers and 1045
Manned Craft To Probe Outer Space 661
(Manpower) Conference on Utilization of Scientists and Engineers 554
Manufacturing Process Solved, Water-Purity Problems in 367
Manuscript Guide for the Author of a Conference Paper 736
Manuscript Guide for the Author of a Transactions Paper 736
Marine Corps Portable "TEW" Line 195
(Marine Corps) Tests Radio-Controlled LVT 864
Marquette University To Open Computing Center 104
Massachusetts Institute of Technology:
Announces Center for Communication Sciences 954
Department of Nuclear Engineering Announced 558
Off Key Symphony? 959
Special Programs Offered during Summer. 543
Special Summer Program in Switching Circuits at MIT 439
Statistical Summer Seminar 557
Massachusetts Society of Professional Engineers, A. H. Kidder Addresses 535
McIlroy Fluid Network Analyzer Presented to Tufts University 254
McMillan, F. O., High-Voltage Laboratory Dedicated to 957
McMillan Memorial Aided to Portland Section Rummage Sale 88
Measuring Magnetic Forces, Method Developed for 994
Mechanics Offered, Doctoral Program in Engineering 328
Medical Aids through Electronic Devices. 866
Meetings, AIEE Future 75, 167, 261, 337, 445, 522, 631, 655, 739, 831, 973, 1051, 1137

MEETINGS, DIRECTORS:
AIEE Board of Directors New York, N.Y., February 7, 1958 346
AIEE Board of Directors, Washington, D.C., April 30, 1958 630
AIEE Board of Directors, Sacramento, Calif., August 21, 1958 1052

MEETINGS, DISTRICT:
East Central District Meeting, Huntington, W. Va., May 13-15, 1958:
Attendance Totalled 312 629
Chesapeake and Ohio Railway's Car Location Information Center. (Photo) 447
Committee Chairman. (Photo) 174
General Electric Kyger Creek Plant, Inspection Trip to. (Photo) 353
Kyger Creek Plant. (Photo) 446
Program, Tentative Technical 448
To Be Held in Huntington 353, 446
View of the Luncheon Session. (Photo). 630
Great Lakes District Meeting, East Lansing, Mich., May 5-7, 1958:
Committee Members. (Photo) 175
Control Room of Station WJIM-TV. (Photo) 341
Kellogg Center. (Photo) 340
Michigan State University Campus Site of Meeting 265
Papers Presented at Meeting, Many Timely 639
Program, Tentative Technical 341
To Be Held at Kellogg Center on Michigan State Campus 340
Middle Eastern District Meeting, Washington, D.C., April 28-30, 1958:
Attendance Over 600 628
"Engineering in the Nation's Capital," District 2 Meeting Will Cover 264
Inspection Trip to David Taylor Model Basin. (Photo) 265
Inspection Trip to U.S. Naval Ordnance Laboratory. (Photo) 175
National Bureau of Standards, Inspection Trip to. (Photo) 335
Pressurized Ballistics Range at Naval Ordnance Laboratory. (Photo) 358
Program, Tentative 335
South West District Meeting, Tulsa, Okla., March 31-April 2, 1958:
Attendance Totalled 471 523
Barrett, President, Made Chief of Kiowa Tribe. (Photo) 523
Held March 31 in Tulsa 523
Program, Tentative Technical 256
Skyline of Tulsa, Okla. (Photo) 255
Tulsa, Oil Capital of the World, Will Be Host 255
Tulsa Power Station. (Photo) 257
Tulsa to be Site of Meeting. (Photo) ... 86

MEETINGS, GENERAL:
Fall General Meeting, Pittsburgh, Pa., October 26-31, 1958:
Aerial View of U.S. Steel's Research Center. (Photo) 827
Civic Auditorium-Sports Arena to be Erected in Pittsburgh. (Photo) 637
East Pittsburgh Plant of Westinghouse. (Photo) 827
Galvanizing Line at Irvin Works of U.S. Steel. (Photo) 970
Inspection Trip to Westinghouse Atomic Power Dept. 972
Meeting Cancelled Because of Hotel Strike 1135
Night View of Golden Triangle. (Photo). 969
Pittsburgh Welcomes Fall Meeting 969
Pittsburgh Will Be Host 637
"Renaissance City of America" Will Be Host to Fall Meeting 826
Research Center of Alcoa. (Photo) 971
"Research—Gateway to the Future" Will Be Theme of Meeting 745
Shippingport Atomic Power Station, Inspection Trip to. (Photo) 745
Special Train to Conway Yard of Pennsylvania Railroad. (Photo) 826
TOD Forum to be Held 970
Pacific General Meeting, Sacramento Calif., August 19-22, 1958:
Attendance Totalled 611 1047
Committee Chairman. (Photo) 530
Elverta Substation, Inspection Trip to. (Photo) 636
Folsom Dam and Generating Facilities. (Photo) 733
Folsom Power House Te Be Dedicated as a Historical Monument. (Photo) 637
Papers Presented 1053
President Hickernell Presents a Fellow Diploma to P. E. Shaad. (Photo) 1047
Program of Wide Interest 732
Rocket Engine Test Stand of Aerojet-General Corporation's Plant. (Photo) .. 732
Sacramento Section Acts as Host 1047
To Be Held in Sacramento 636
Summer General Meeting, Buffalo, N.Y., June 22-27, 1958:
Aerial Photograph of Ontario Hydro's Two Sir Adam Beck–Niagara Generating Stations 451
Air Transportation Conference To Be Held During Summer Meeting 354
Attendance Over 2000 828
Black, H. S., Receives Lamme Medal. (Photo) 829
Buffalo and Niagara Frontier To Be Hosts 450
Buffalo, Birthplace of Power, Will Be Site for Meeting 260
Buffalo To Be Host 519
Building Fund Discussed at AIEE Section Delegates Meeting 835
Center City Area of Buffalo. (Photo) 260
Chairman of Committees (Photo) 260
Forum on Technical Committee Chairman Is Conducted on a Group Dynamics Basis 833
Lapp Insulator Plant (Photo) 520
Monteith, A. C., Presents Plaque to Robert Adam. (Photo) 829
Munhall, D. J., W. J. Barrett, and L. F. Hickernell Discuss Business. (Photo) .. 832
Niagara Falls Works Program (Photo) .. 519
Niagara Mohawk Huntley Station, Inspection Trip to. (Photo) 354
Papers Presented at the Summer Meeting, List of 839
Provides Unique Features 354
Sessions, List of 519
Winter General Meeting, New York, N.Y., February 2-7, 1958:
Attendance Totaled 5,340 342
Dr. Goldsmith Named Chairman of AIEE Member-Gifts Campaign for New Center 349
Eta Kappa Nu Awards Dinner 352
Formation of New Section Announced at AIEE Section Representatives Meeting on February 4 347
Highlights of the February AIEE Board of Directors Meeting 346
Hoboken Yard of Bethlehem Steel, Inspection Trip to. (Photo) 79
Hodnette, J. K., Receives Edison Medal from J. H. Foote. (Photo) 344
Institute Reorganization Discussed at Forum of Technical Committee Chairman on February 6 349
Largest Technical Program Scheduled .. 67
Long Island Lighting, Inspection Trip to. (Photo) 74
New Ticket Sales and Service Bureau at Penn Station. (Photo) 70
Program, Tentative Technical 71
Quick, D. M., Points Out Registration Figures to President Barrett. (Photo) ... 346
Sikorsky Aircraft, An All Day Inspection Trip to. (Photo) 69
TOD Forum To Be Held at Winter Meeting 80
Winners of Awards for Best Technical Papers. (Photo) 343
Zucoli, Danilo, Wins Volta Fellowship. (Photo) 345
Winter General Meeting, New York, N.Y., February 1-6, 1959:
Committee Listed 847, 1134
Hotel Information, Smoker, etc. 1134
Meetings of Other Societies, Future 107, 167, 193, 275, 367, 467, 561, 767, 859, 989, 1069, 1153
Meetings, Scheduled of General and District. (Chart) 521
Melting Technique, High Vacuum 660
Members, New AIEE. (Photo) 334
Members Visit Tidewater, AIEE (Photo) .. 83
Membership Campaign for Funds for New United Engineering Center Opens 164
Membership Directory Order Form, 1957-58 AIEE 97
Membership Directory 1958-59, Now Available Only to AIEE Members—Price $2 ..1055
Membership, Transfers and Election 98, 180, 271
Memory Devices, Advance in 369
Memory Unit Uses Superconductivity Principle, High-Speed 116
Mercury Batteries Used in U.S. Satellites. 858
(Messages) Electronic Impulses Converted to Printed Words 865
(Meteor Camera) Radiometric Measurements of Jupiter IRBM Made by Tracking. 852
Meteor Trails, Signals Bounced from 114
Michigan State University, MISTIC Aids Research at 102
Microwave Course at Case Institute of Technology 554
Microwave System Improves Police Efficiency 1157
Midwest Universities Formed, Associated. 965
(Miniature) Ultraminiature Electronic Device 661
Missile-Age Cruiser Is Best Antiaircraft Arsenal Anywhere 763
Missile, Engine Cluster Propels Atlas 1154
(Missile) "Hot" or "Cold" Shoot Used in Acceleration Test 989
Missile Makes Public Bow for Army, Navy Talos 192
(Missile) Polaris Prototype Tested by Hurling Huge Dummy 653
Missile Research, Three-Point Program Includes 768
Missile Subs Achieve Pinpoint Navigation, Polaris 468
Missiles and Helicopters, Developments in. 771
Missiles Manufactured by Automated Machine Tool Line 430
Missiles Photographed by New Optical System, Long Range Ballistic 109
Missiles Problems, Research Tool for Ballistic 370
Missouri School of Mines, New Facilities for EE Education at 961
MISTIC Aids Research at Michigan State University 102
MISTIC Plays "Waltzing Mathilda" 558
Mobile Units for Missile Checkout 374
Modulation in the Telephone Industry, Pulse Code 769

Monitor for Jet Age Traffic 473
Monophonic Not Monaural 1070
Moon. Watchers, Aircraft Running Lights Identified for 471
Motor Exposed to Radiation Source, Silicone-Insulated 274
Motors, Improve Insulation for Open-Type. 993
Muscle for Paralyzed Hands Developed, Artificial 475
Mystery Man Needs Identification 377

N

(Namal Centrifuge) Giant Step Into Space. 986
NAS–NRC To Co-ordinate NBS Advisory Committee Program 358
Nation-Wide Study of Co-operative Education 1131
National Bureau of Standards:
Clocks, Sputniks, and Primary Standards. 275
Improved Method of Cooling Electronic Equipment 115
NAS–NRC To Co-ordinate NBS Advisory Committee Program 358
Radiotelescopes Track Satellite's Signals. 110
Summer Career Program Aids in Scientist Recruitment 329
National Cash Register Company Presents Computer to Antioch College 104
National Electrical Manufacturers Association: Elects New 1958 President 860
National Electrical Week, Officers Elected for 1959 532
National Electronics Conference:
Holds Recognition Dinner 754
Officers for 1958 Announced 532
Program Listed 974
Report on Satellites and Space Stations. 827
Three Distinguished Speakers Scheduled. 974
National Engineers' Week, Leading Figures Sponsor 166
National Science Foundation:
Appoints Dr. Fontaine Fellowship Program Director 332
Awards Two Grants for Research Reactors 253
Senior Postdoctoral and Science Faculty Fellowships 961
Sponsored Institutes for Teachers 768
To Support In-Service Institutes 249
Travel Grants Provided 535
National Society of Professional Engineers:
Annual Meeting June 11-14 in St. Louis. 530
Engineering Title Standards Proposed by NSPE 368
Nation-wide Scholarship Program 249
New Officers Announced 850
Nautilus Makes "Under-the-Ice" History USS 988
(Navy) Experimental Radar Research Plane Designed 602
Navy Promoting Program To Help Science Teachers 333
Navy Talos Missile Makes Public Bow for Army 192
Navy Vanguard in Orbit 2,513 Miles Up. 475
Nebraska Pioneers Electronic Vehicle Control 200
Neoprene Protected, Seaway Power 473
Netherlands Opens High-Voltage Research Laboratory 1071
Network Analyzer Given Lehigh New Training Tool, Power 967
Neuschaefer, G. C., Receives National Reliability Award 170
Neutron Decay Advanced, Research in 656
Neutron Decay Flouts "Parity Conservation" Law, Radioactive 110
Newark College of Engineering Establishes Instructor Training Program 1132
New York Air Defense Sector, Headquarters for SAGE 1064
NYU and Curtiss-Wright To Conduct Solar Research 1129
New York University Announces Plans for New Engineering Building 964
Newark College of Engineering Starts Nuclear Graduate Program 186
Niagara Falls Project, WPI Produces Model of 956
Niobium, Technique Developed for Preparation of 114
Nominating Committee To Meet in New York February 3 82
Nominees for Institute Offices, Report of. 354
(North American Aviation) High-Explosive Charge Forms Jet Trainer Fuel Tanks 1151
North Carolina Engineering Foundation Plans To Finance Professorships 1133
Northwestern University:
Awarded Contract for Research 955
Engineering Appointments 1130
Student Develops New Loudspeaker "Throat" 252
Nose Cone and Space, Details Revealed on. 770
Nuclear Congress (1958):
ALCO Products, Inc. Exhibit. (Photo) 525
All-Congress Banquet Highlights 524
Order Form 259
Over 30 Societies Plan for 1958 NESC To Be Held as Part of Nuclear Congress .85
Preprints and Proceedings, 1958 584
Progress in Nuclear Energy Uses To Be Demonstrated 170
Program, Tentative Technical 258
To Be Held March 17-21 in Chicago ...258
Nuclear Congress (1959):
October 1 Is Deadline for Paper Outlines 847
Plans Announced for Fifth Nuclear Congress To Be Held in Cleveland in April 1959 754
Nuclear Domes, Air Locks in 860
Nuclear Electricity Research, Cost-Competitive 992
Nuclear Energy Courses for High School Teachers 250
Nuclear Energy for Industry, Summer Program in 436
Nuclear Energy Power, India Invests in ..863
Nuclear Engineering Program Announced by Nuclear-Chicago 189
Nuclear Power Station Is Located in Chicago Area 367
Nuclear Reactor BR 2 Is Constructed in Belgium 655
Nuclear Reactor Project at University of Akron 328
Nuclear Research Reactor, University of Frankfurt 254
Nuclear Science at Clemson, Graduate Study Program in 439
Nuclear Technology Briefs, Reactor Developments and 572, 657
Nuclear Technology Courses for Foreign Students 1128
Nuclear Training "Package" for Colleges and Universities 958

O

Oak Ridge:
Radioisotope Course Designed for Industry 1132
Science Professors Benefit from ORINS Research Program 100
Traveling Lecture Program 964
Observatory, Kitt Peak Site of New Astronomical 479
(Ocean) Analyze Data on Deep Sea Currents 665
Ocean and Polar Flights, Ultraprecise Compass for *DC-8* 368
Off-Campus Program in Engineering Inaugurated 1044
Officers, AIEE District No. 13. (Photo) ..734
(Officers) AIEE Nominating Committee to Meet in New York on February 3 82
Officers, Departments, and Committees for 1958-59, AIEE 870
Officers To Be Nominated for 1958 Institute Election 1055
Offices, Report of Nominees for Institute. 354
Ohio State University, Antenna Research at 1129
Ohio State University College of Engineering, Annual ACE Day Scheduled by 328
Optical System, Long Range Ballistic Missiles Photographed by New 109
(Orthotronic Control) System Corrects Errors at Electronic Speed without Human Help 767
Oxides, Transparent Magnetic 371

P

Panels, Greater Illumination with Pastel Floating 1158
Paper, Manuscript Guide for the Author of a Conference 736
Paper, Manuscript Guide for the Author of a Transactions 736
Papers and Articles, Requirements for Authors and Publication Rights for AIEE 737
Papers Are Now Available, Additional District 756
Papers, Prize Rules for AIEE 87, 834
Papers Titles, Additional Atomic Energy Conference 567
Paralyzed Hands Developed, Artificial Muscle for 475
"Parity Conservation" Law, Radioactive Neutron Decay Flouts 110
Patent for Radar Device, Carnegie Professor Awarded Late 250
Penn State Offers Technical Writing Seminar 438
Pennsylvania State University, Seminars at. 555
(Persistor) Memory Unit Uses Superconductivity Principle, High-Speed 116
Pettit, J. M. Named Dean of Stanford School of Engineering 968
Phase-Equilibrium Studies, Controller for. 858
Phosphor Coated Transparent Tube Developed 366
Physics Program at Lowell Tech, Engineering 1128
Physics Teaching, AIP Program Aims to Improve 184
Physics, Televised Course in Atomic Age. 1040
Pictorial Review:
Coded Mail Sorting 730
Explorer IV 1032
Frescanar—3-D Defense 1122
Missiles Manufactured by Automated Machine Tool Line 430
Prefabricated Aluminum Substation ..627
Space Tools 825
Test Facility for Central Air Conditioning 928
Ultrasonics 518
Plastic Models Available for School Use ..438
Polaris Missile Subs Achieve Pinpoint Navigation 468
Polaris Prototype Tested by Hurling Huge Dummy 653
Police Efficiency, Microwave System Improves 1157
Polytechnic Institute of Brooklyn:
MRI To Use Grant for Electronics Research 436
Murals Introduce Novel Art Technique. 959
Weber, Dr. Ernst, Inaugurated as President 552
Portable Radio Plays on Free Power from Sun 856
Power Field, Engineering Careers in the Electric 250
Power Line Transmission Tower, Helicopter Erects 468
Pratt, Alumnus Establishes Scholarships at. 186
Pratt Engineering School, Alumnus Presents Gift to 434
Pratt Institute Offers Graduate Nuclear Engineering Program 101
Preprint Prices 256, 339, 448, 636, 758, 849, 978
Presidents To Speak on "Functional Plan," AIEE and ASME 453
Pressure Conditions 95 Miles Up Simulated. 112
Prices for Subscriptions to Bimonthly Publications and Transactions, Increased ..632
(Princeton University) Facility for Thermonuclear Research. (Photo) 439
Print-Out Equipment, Extremely Fast ...198
Printed Words, Electronic Impulses Converted to 865
Prize Rules for AIEE Papers 87, 834
Prototype Atomic Submarine, Instrumentation System for 766
Prototype Tested by Hurling Huge Dummy, Polaris 653
Presidents To Speak on "Functional Plan," cies, Requirements for Authors and ..737
Pulse Code Modulation in the Telephone Industry 769
Pumphrey, Prof. F. H., Named Dean of Engineering at API 433
Punch-Card Operators Taught Keyboard Automatically 570
Purdue, Course in Quality Control by Statistical Methods at 553

Q

Quality Control by Statistical Methods at Purdue, Course in 553
Quality Control, Short Course in 252
Quarles, D. A., Receives Award of Merit. (Photo) 85

R

Radar Device, Carnegie Professor Awarded Late Patent for 250

Radar Information Is Converted to Television Signal 365
Radar Range, READ System Increases ...663
Radar Research Plane Designed, Experimental 662
(Radar) Research Tool for Ballistic Missiles Problems 370
Radar Station on Wheels Studies Cloud Physics, U-M Weather 1132
Radiation, Camera Detects Intense 372
Radiation Device for Cancer Treatment 469
Radiation Exposure Limits Adopted, New. 194
Radio-Controlled LVT, USMC Tests 864
Radio Corporation of America:
Grants Fellowships to 9 Graduate Students 254
Three-Point Program Includes Missile Research 768
Transistorized Counting System 376
Radio Operators, Acknowledgments Cards for Amateur 771
Radio Plays on Free Power from Sun, Portable 856
Radio Telescopes, Amplifier Extends Range of 191
Radio, Transistor Transmitter Developed for Satellite 472
(Radio Transmitter) Space Sentry Aids Explorer Satellite Tracking 378
Radioactive Neutron Decay Flouts "Parity Conservation" Law 110
Radioisotopes and Bioengineering Laboratory, Georgia Tech's 557
Radiometric Measurements of Jupiter IRBM Made by Tracking 852
Radiotelescopes Track Satellite's Signals, NBS 110
Reactor Developments and Nuclear Technology Briefs 572, 657
Reactor To Be Installed for Campus Training, Research 569
Reactors, Mass Production of Low-Power Research 108
"Reads" Handwritten Numerals, Machine. 369
Record Aids Program of Scientific Education 252
Rectifier Production, Cutting Silicon Crystal for 770
Red Book, Section Study Groups Based on AIEE 751
Redstone, Liquid Propellant Rocket Engine for 190
Report of the Board of Directors, Summary of the 740-3
Requirements for Authors and Publication Rights for AIEE Papers and Articles ..737
(Research-Cottrell, Inc.) Model Studies Save Money in Designing of Flues 465
Research Information Committee of the AIIE To Secure Abstracts 375
Research Reactors, Mass Production of Low-Power 108
Reservations Made in Seconds, Hotel 199
Resistance Thermometer, Germanium 660
(Reynolds Metals Co.) Automatic Sun Louvers Feature of Aluminum Showcase 990
Rights for AIEE Papers and Articles, Requirements for Authors and Publication ..737
Rochester's New College of Engineering, Appointments in 958
Rockefeller Center, Fountain of Lights On in 860
Rockefeller Grant for Harvard School of Public Health 189
Rocket Engine for Redstone, Liquid Propellant 190
(Rocket Test) Static Firings Viewed from Blockhouses 469
Rocketry, Safety Rules for Backyard 861
(Russia) Research Tool for Ballistic Missiles Problems 370
(Russia) Translations of USSR: Scientific and Engineering Journals Now Available to AIEE Members 173, 526, 744, 975
Russian at Harvard, Full-Year Course in 554
Russian, Summer Course in Scientific ..558
Rutgers Microwave Laboratory, Dr. Sirkis Named Head of 104
Rutgers Receives Esso Grant for Research. 963

S

Safety Features Electronic Controls, Automobile 863
Safety Is Applied Intelligence, Electrical. (Safety Committee) 643
Safety Measures, Flight Efficiency and ...862
Safety Rules for Backyard Rocketry 861
SAGE New York Air Defense Sector, Headquarters for 1064
(St. Lawrence Power) Seaway Power Neoprene Protected 473
(Satellite) Details Revealed on Nose Cone and Space 770
(Satellite) In Orbit and Reporting Regularly 563
Satellite Radio, Transistor Transmitter Developed for 472
Satellite Tracking, Space Sentry Aids Explorer 378
Satellite Weather Information, Laminated Bits To Gather 196
Satellites and Space Stations Among Features of NEC, Report on 827
Satellites, Mercury Batteries Used in U.S. ..858
Satellite's Signals, NBS Radiotelescopes Track 110
(Scan Conversion Equipment) Radar Information Is Converted to Television Signal. 365
Schelkunoff, Dr. S. A., Joins Columbia University Faculty 965
Science and Engineering, Increase in Earned Degrees in 555
Science and Technology, The Frontiers of. 277
Science Fair To Be Held at NBS Boulder Laboratories 188
Science Teachers, Navy Promoting Program to Help 935
(Science) Three Southern States Sponsor "Traveling Teachers" 432
Scientific and Engineering Journals Now Available to AIEE Members, Translations of USSR 173, 526, 744, 975
Scientific Education, Record Aids Program of 252
Scientists, Subsurface Current Measured by. 866
Sea Currents, Analyze Data on Deep 663
Sea Scrolls Indexed by Computer, Dead ...561
Sea to Fresh Water at Aruba Distillation Plant 861
Seaway Power Neoprene Protected 473
Secretaries Meeting in Cleveland, Engineering Societies 647

SECTION ACTIVITIES:

Boston Meeting. (Photo) 456
Chicago Members Visit Research Laboratory 1142
Cincinnati Section Holds Student Paper Competition 962
Cincinnati, Study Group Organized at ...644
Cleveland Section, AIEE President Visits .534
Cleveland Section on TV. (Photo) 749
Corpus Christi Reports on Library Project 976
Foote, J. H., Receives Plaque from Michigan Section 1144
Fort Wayne, Dr. Engstrom Addresses ..1145
Fort Wayne To Hold 50th Anniversary Celebration October 9 744
Hawaii, T. H. MacCauley Addresses ..1056
Houston Celebrates Anniversary 1055
Idaho, AIEE Vice-President M. M. Elwell Visits 755
(Iowa) M. S. Coover Receives Plaque from AIEE 1056
Ithaca Executive Committee Plan Section Activities 1143
Kansas City Sponsors Public Lecture Series 1057
Lehigh Valley Meeting (Photos) 454
Lehigh Valley Section Officers, (Photo) ..89
Los Alamos Subsection Installs Officers. (Photo) 1138
Los Angeles Elects New Chairman 850
Los Angeles Holds Student Prize Paper Contest 645
Los Angeles Meeting, Dr. Kaplan Speaks at (Photo) 457
Los Angeles Meeting. (Photo) 176
Louisville Holds Refresher Course 754
Maine Demonstrates Excellent Attendance Record 858
Maine Meeting, Technical Discussions at. 847
Memphis Installs Officers. (Photo) 842
Memphis Meeting, Fellow Diploma Presented at. (Photo) 457
Mexico Installs Officers 977
Miami Section, President Barrett Visits. 357
Michigan Announces New Officers 644
Michigan Meeting, 50-Year Member Honored at 455
Michigan Presents Symposium 528
Mississippi Sponsors Student Competition 645
Nebraska Section Meeting, AIEE. (Photo) 1145
New Orleans Chairmen. (Photo) 746
Northeastern Wisconsin Section, Formation of New 347
Northeastern Wisconsin Section Holds First General Meeting 1141
Philadelphia Auxiliary Aids Education. 752
Philadelphia Executive Committee Meeting. (Photo) 978
Philadelphia Hears Panel on Engineering Shortage 750
Philadelphia Holds Successful "Students Night" 435
Philadelphia Installs Officers. (Photo) ..841
Philadelphia, "Meet the Engineer" Radio Program Sponsored by 452
Philadelphia, Recent Activities at ..174,455
Philadelphia Section Career Forum Praised by President Eisenhower 169
Pittsfield Executive Committee in Session. (Photo) 1143
Pittsfield Members Receive Awards. (Photo) 266
Pittsburgh Smoker. (Photo) 177
Portland Section Rummage Sale, McMillan Memorial Aided by 88
St. Louis Section Meets with Student Branches, AIEE 102
St. Maurice Valley Section Prize Paper Award (Photo) 533
San Francisco Section Donates $1,000 to Building Fund 838
San Francisco Officers. (Photo) 91
Schenectady Contributes to Building Fund 976
Schenectady Features Timely Program ..643
Section Delegates Meeting, Building Fund Discussed at AIEE 835
Spokane Meets with Student Branches ..559
Spokane Officers for 1958-59. (Photo) ..749
Virginia Mountain Holds Joint Meeting. (Photo) 357
Virginia Mountain Section (Photo) 89
West Michigan Section, Officers of. (Photo) 646

Section and Student Branch Meetings for 1957-58, AIEE 1061
Servolab Unit. (Photo) 183
75th Anniversary Emblem, AIEE 836
Ship to Sail in 1960, Atom-Fueled *N. S. Savannah* Merchant 108
Shopping Center, Electronic Detective Protects 1072
Short Course for Engineers and Managers Set 1045
Signal Corps 98th Anniversary Celebration, Army 658
Signals Bounced from Meteor Trails 14
Silica Foam Is High-Temperature Insulation, Pure 854
Silicon Cells Harvest Sun's Energy 1073
Silicon Crystal for Rectifier Production, Cutting 770
Silicon Crystals Grown without Dislocations 1156
Silicon Diodes in High-Volume Production, Fast Recovery 463
Silicone-Insulated Motor Exposed to Radiation Source 274
Simulator Trains Nike Crews Inexpensively 1155
Simulators, Colleges To Get Reactor 557
Slide Rule for Schools and Industry, Trainer 1132
Snowflakes for Brussels World's Fair, Giant 376
Society for the History of Technology ..659
Solar Research, NYU and Curtiss-Wright to Conduct 1129
(Solartron) Punch-Card Operators Taught Keyboard Automatically 570
Sound-Slide Film Programs Available, New 332
South Pole Temperature Observations ..474
Southern Regional Graduate Summer Session in Statistics 330
Space Exploration Commission, Federal ..568
Space Flight at 2 Million Miles an Hour ..668
Space, Giant Step Into 986
Space, Manned Craft To Probe Outer ...661
Space Science Board Established by NAS-NRC 1068
Space Sentry Aids Explorer Satellite Tracking 378
Space Travelers' Use, Atomic Clock for ..571
Spectroanalyzer Obtains Rapid Chemical Data on Substances 560
(Sperry) Advance in Gyroscope Accuracy ..471
(Sperry Gyroscope Co.) Electron Tube Works After Explosion 369
Sputniks, and Primary Standards, Clocks ..275
(Standards) AIEE No. 1—General Principles Upon Which Temperature Limits Are Based in the Rating of Electrical Equipment 846

Standards, Clocks, Sputniks, and Primary. 275
Standards Conducted, U.S.–British Comparison of Time 1158
Stanford Research Laboratory, FIER Awards Grant to New 252
Stanford School of Engineering, J. M. Pettit Named Dean of 968
Static Firings Viewed from Blockhouses ..469
Statistics, Southern Regional Graduate Summer Session in 330
Steel Failure, Strange Crystals May Explain 112
Steel, Scientists Develop "Four-Way" Magnetic 106
Steinmetz Memorial Program Telecast in Schenectady, N. Y. 977
Stomach Camera. (Photo) 1154
String Models Effective as Visual Aids in Education 1129
(Stromberg-Carlson) Extremely Fast Print-Out Equipment 193

STUDENT BRANCH ACTIVITIES:
AIEE–IRE Auxiliary at University of Alabama 331
AIEE–IRE Branch Honors Dr. Honnell 435
AIEE–IRE Students Hold Inter-University Convention 102
Christian Brothers College Student Branch Receives Charter. (Photo) 186
Clemson College, AIEE in. (Photo) ..248
Duke University, AIEE in. (Photo) 929
Idaho, Outstanding Engineer at University of 939
Illinois Tech Student Branch, New Meeting Place for 553
Lamar State College of Technology, AIEE in. (Photo) 431
Lamar State College of Technology Branch. (Photos) 457
Northeastern University, AIEE in. (Photo) 181
Sound-Slide Film Program for AIEE Branches 551
Student Conference, AIEE District No. 4 Annual 951
Student Branches, AIEE St. Louis Section Meets with 102
University of Akron, AIEE in. (Photo) 1034
University of Arizona Students Inspect New Power Plant 253
University of Dayton, AIEE in. (Photo) 525
University of Santa Clara, AIEE in. (Photo) 99
University of Texas Has Active Student Branch Program 188
Villanova University, AIEE in. (Photo) 1124
Worcester Polytechnic Institute, AIEE in. (Photo) 539
Student Branch Meetings for 1957-58, AIEE Section and 1061
Submarine, Instrumentation System for Proto-type type Atomic 766
Subs Achieve Pinpoint Navigation, Polaris Missile 468
Subscriptions to Bimonthly Publications and Transactions, Increased Prices for 632
Subscriptions to Volume 76 of 1957 AIEE Transactions, Last Call for 172
Substation, Install Indoor Electrical 656
Subsurface Current Measured by Scientists 866
Summer Conferences, Seminars and Training Courses 376, 566
Sun, Heliostat Keeps Furnace Tracking ..989
Sun Louvers Feature of Aluminum Showcase, Automatic 990
Sun, Portable Radio Plays on Free Power from 856
Supersonic Reconnaissance Bomber, Control System for *B-58* 464
Suspension System, Switchboard Instruments Use Taut Band 856
Sutures, Atoms Used for Sterilizing 377
(Swarthmore College) Honors Program in Engineering Sciences 968
Swedish Power Plant, Giant Turbines for 474
Swedish Power Plant Operating 1158
Switching Circuits at MIT, Special Summer Program in 459
("Sylva-Lume") Dramatic Lighting for Central Sphere of Atomium 568
Symposium on Computer and Electrical Systems at University of Vermont May 15, 1958 452
Syracuse University Establishes Semiconductor Laboratory 550
Syracuse University Orders Reactor Simulator 1129

T

(TALOS) Missile-Age Cruiser Is Best Anti-aircraft Arsenal Anywhere 765
TALOS Missile Makes Public Bow for Army, Navy 192
TASO, University of Texas to Analyze Data for 962
Tau Beta Pi Fellows for 1958-59 555
Taut Band Suspension System, Switchboard Instruments Use 856
Tax Deductions Incurred in Society Activities 172
Teachers in a Technological Society, Demands on 371
Teachers, Navy Promoting Program To Help Science 333
Teachers, Plan for Increasing Number of Engineering 333
Teachers, Three Southern States Sponsor Traveling 432
Technical Apprentice Training Lags in U.S. 476
Technical Institute Enrollment, Survey of 956
Technique Developed for Preparation of Niobium 114
Technology, The Frontiers of Science and 277
(Telephone) "White Alice" Network in Operation 565
Telephones but No Additional Cables, More 1152
Telescope To Be Built at University of Michigan, Giant Radio 333
Telescopes, Amplifier Extends Range of Radio 191
(Teletypewriter) Army Message Printer Device Is First Superspeed Combat Unit 766
Televised Course in Atomic Age Physics 1040
Television and Speech Research Devices, Digital Computers Simulate and Test ...1068
Television at the New York Trade School, Closed-Circuit 556
(Television) Wrap-Around Antenna Developed 857
Television Progress, On-the-Wall 562
Television Signal, Radar Information Is Converted to 365
Television Transmission Developed, Dual Picture 469
"TEW" Line, Marine Corps Portable 195
Texas A&M College, 100% Club of 966
Texas Engineers Discuss AIEE Proposal ..457
Thermometer, Germanium Resistance 660
Thermonuclear Research, Facility for. (Photo) 439
This and That from Here and There 858
"Throat," Student Develops New Loudspeaker 252
Tidewater, AIEE Members Visit. (Photo) ..83
Time Standards Conducted, U.S.–British Comparison of 1158
Tinning by Controlled Operation of Processes, Electrolytic 987
Tracking, Radiometric Measurements of Jupiter IRBM Made by 852
Trade Fair at New York Coliseum, World 664
Traffic Engineering, Fellowships Available in 186
Trailerized AEW Simulator Trains Crews Safely on Ground 992
Train Pulls 10-Ton Load, Indoor Electronic 664
Training Lags in U.S. Technical Apprentice 476
Transactions, Increased Prices for Subscriptions to Bimonthly Publications and ..632
Transactions, Last Call for Subscriptions to Volume 76 of 1957 AIEE 172
Transactions Paper, Manuscript Guide for the Author of a 736
Transformers with Low-Sound Enclosures, Power 113
Transistor Amplifier, Field Effect 771
Transistor Data-Processing Systems, All- .660
Transistor Transmitter Developed for Satellite Radio 472
(Transistor) Ultraminature Electronic Device 661
Translations of USSR Scientific and Engineering Journals Now Available to AIEE Members 173, 526, 744, 975
Transmission Tower, Helicopter Erects Power Line 468
Transmitter Developed for Satellite Radio, Transistor 472
Travel Grants Provided by NSF 585
Trinity College Offers Five-Year Engineering Plan 940
Tube Developed, Phosphor Coated Transparent 366
Tufts University, McIlroy Fluid Network Analyzer Presented to 254
Turbines for Swedish Power Plant, Giant .474
Twin Coal Unloader to Serve Electric Power Plant 1070
(Twistor) Advance in Memory Devices ..369

U

Ultrasonic Welder, Metals Joined with ..474
Ultrasonic Welding of Various Types of Materials 279
Union College Alumnus To Return as Faculty Member 436
Union College, "Education and the Atom" Exposition at 187
United Engineering Center:
Aerial View of Center Site. (Photo) ..263
Cincinnati Supports Building Fund Campaign 979
Current Study of the UEC 1139
Demolition Proceedings. (Photo) 453
Dr. Goldsmith Named Chairman of AIEE Member-Gifts Campaign for New Center 349
Dr. Kelly Launches Fund Drive for New United Engineering Center 66
Greater New York Business Campaign for United Engineering Center Under Way 633
Membership Campaign for Funds for New United Engineering Center Opens ..164
Model of New United Engineering Center. (Photo) 165
New York Electrical Engineers Donate $15,000 165
Photographs of Building—Present and Future 527
San Francisco Section Donates $1000 to Building Fund 838
Schenectady Section Contributes to Building Fund 976
United Engineering Center—A Symbol of Engineering Achievement 838
United States Exchange Program Marks 10th Year 437
United States National Committee of Commission Internationale de l'Eclairage ..444
(U.S. Steel) Electrolytic Tinning by Controlled Operation of Processes 987
University Institute on Automatic Data Processing 1072
University of Akron, Nuclear Reactor Project at the 328
(University of Arizona) Research Reactor to be Installed for Campus Training ..569
University of California:
Summer Program in Nuclear Energy for Industry 436
University of Colorado To Obtain Scientific Equipment, Firms Aid 334
University of Frankfurt Nuclear Research Reactor 254
(University of Illinois) Short Course in Quality Control 252
University of Louisville, "Engineers' Week" at 555
University of Michigan:
Announces an Intensive Course in Automatic Control 332
Giant Radio Telescope To Be Built 333
Summer Engineering Courses 553
Weather Radar Station on Wheels Studies Cloud Physics 1132
University of Michigan Research Institute, Engineering Research Institute Becomes 960
University of Pennsylvania:
Computers and Basic Research 199
University of Rochester, College of Engineering To Be Established at 331
University of Texas To Analyze Data for TASO 962
University of Wisconsin:
Engineering Institutes Being Sponsored During May and June 432
Refresher Institutes at UW Extension Division 1045
WISC at Work on Wisconsin Campus ..250
UPADI Plans Convention in Montreal September 2-6, 1958 646

USS Galveston Equipped with Bendix TALOS Missile 763
USS Nautilus Makes "Under-the-Ice" History 988

V

Vacuum Metallurgy at First-Hand, Cornell Students to Study 962
Vanguard in Orbit 2,513 Miles Up, Navy ..475
Vehicle Control, Nebraska Pioneers Electronic 200
Vending Machines, Bill Changer for 199
(Venezuela) Lost Uninhabited World Soon to Have Steel Mill, Power Dam and 100,000 People 764

W

Wall Television Progress, On-the- 562
(Washington National Airport) Fluorescent Strip System Spreads Carpet of Light for Landings 652
(Washington University) Intensive Courses in Industrial Engineering 440
Water at Aruba Distillation Plant, Sea to Fresh 861
Water-Purity Problems in Manufacturing Process Solved 367
Weather Automatically, "Grasshopper" Transmits 857
Weather Information, Laminated Bits to Gather Satellite 196
Weather Radar Station on Wheels Studies Cloud Physics, U-M 1132
Weather Warnings To Be Broadcast by Conelrad 472
Weber, Dr. Ernst, Inaugurated as President of Polytechnic Institute 552
Welder, Metals Joined with Ultrasonic ..474
Welding of Various Types of Materials, Ultrasonic 279
Western Technical Writing Institute at San Marino 433
Westinghouse Electric Corporation:
Motors Operate in High-Octane Fuel ..876
Scientists Develop "Four-Way" Magnetic Steel 106
Switchboard Instruments Use Taut Band Suspension System 856
Temperature Chamber Tests Armament Systems 475
Westinghouse for Hall of Fame, AIEE President Barrett Unveils Bust of 168
"Whiskers," Metals Sprout Crystalline .866
"White Alice" Network in Operation 565
Wind Tunnel, Escape Velocity Exceeded in 570
Worcester Polytechnic Institute Produces Model of Niagara Falls Project 956
World Assembly, Israel Engineers Plan ..372
World Power Conference, Canadian Sectional Meeting of the 745
World Power Conference, Many Attend Sectional Meeting of the 1135
World Power Conference Meets in Canada for First Time 846
World Soon To Have Steel Mill, Power Dam, and 100,000 People, Lost Uninhabited 764
World Trade Fair at New York Coliseum 664
Writing Seminar, Penn State Offers Technical 438

X

X-Ray Amplifier Permits Room-Light Viewing 998
X-ray Viewer Demonstrated at AMA Meeting 371
X-10, Automatic Landing System Successfully Lands Navaho 115

Y

Yale University:
Atom-Smasher To Be Constructed at Yale 957
Joins AURA, Inc. 434
(Year Book) 1957-58 AIEE Membership Directory Order Form 97
1958-59 Order Form 1059

Biographical Index

Includes all Personal and Obituary Items on AIEE Members

Adams, Comfort Avery ..... †461
Affel, H. A. 1148
Ailleret, Pierre J. *757
Anderson, C. H. 537
Anson, Edward Hiram *92
Antes, L. L. 179
Anthony, C. W. 761
Armstrong, Emerson A. *980
Arnold, R. L. 538
Attwood, S. S. 984

B

Baehr, Albert M. ..... †762
Baker, R. A. 864
Baker, W. R. G. *178, 1059
Barbrow, L. E. 762
Barns, Bird Lee ..... †1149
Bartles, S. P. 461
Bartlett, C. H. 461
Bates, Glenn 97
Bean, George W. *93
Bear, Frederick Thomas *647
Bedell, Frederick ..... †650
Begovich, N. A. 762
Behar, Manoel Felix de Mayo ..... †985
Behn, L. 1149
Berberich, L. J. 851
Bergmann, W. F. 269
Berkner, L. V. 461
Bernhard, C. W. 538
Bessesen, Benjamin B. ..... †651
Biba, R. J. 364
Bibbero, R. J. 649
Bishop, William Smart ..... †270
Bjorquist, Carl Henry *1146
Black, William Franklin ..... †462
Blake, D. K. 96
Blakely, R. T. 1059
Blakeslee, T. M. 1059
Blalock, Lewis Brown ..... †651
Blauvelt, H. S. 364
Blumberg, H. G. 538
Bond, Arthur E. ..... †97
Boring, M. M. 461
Boyd, J. A. 1059
Brauer, H. H. 649
Braunig, V. H. 538
Brenner, Morris 537
Brown, Charles Thomas ..... †762
Brown, G. W. 649
Brown, R. N. 179
Browne, Thomas Everett, Jr. *757
Buchanan, John C. *851
Buck, Harold Winthrop ..... †985
Buechler, L. W. 1149
Bullock, W. C. 97
Burdeshaw, T. A. 179
Burtness, R. W. 538
Busignies, Henri 761

C

Cahen, Francois Michel *758
Campbell, J. O. 1148
Cannon, C. E. 649
Cannon, Robert Simpson *93
Carpenter, William Philip *980
Chaffee, William N. ..... †651
Chaika, Stephen 461
Chamberlin, E. C. 270
Chapman, John James ..... †651
Chase, W. H. *362
Chaskin, W. S. 1149
Childers, R. F. 364
Chinn, Howard Allan *458
Chope, W. E. 269
Christensen, P. M. 179
Clary, W. T., Jr. 762
Coleman, W. E. 461
Combellick, T. A. 538
Combes, R. M. 984
Cook, P. E. 650
Cooper, A. J. 984
Corbell, L. L. 461
Cordell, J. E. 179
Coulthard, William Barwise ..... †1059
Cozzarin, V. J. 538
Crapo, Hayes 364
Cross, J. L. 179

D

Dalziel, Charles Francis *93
Dana, A. S. 461
Danner, R. F. 761
Darrah, William 1149
Dart, Harry F. *758
Davis, J. W. 461
Davis W. H. 537
Dean, N. J. 650
DeBolt, D. G. 538
Del Col, A. C. 538
Devitt, J. L. 650
Dickinson, R. C. 538
Diebold, E. J. 650
Dimity, C. D. 538
Dingley, Edward Nelson, Jr. *93
Dolkart, Leo *980
Dornhoefer, Warren J. ..... †1060
Drabelle, John Mitchell ..... †985
Drake, J. H. 851
Dreyer, William C. ..... †762
Duffy, E. C. 537
DuMont, A. B. 650
Duncan, Thomas Charles ..... †1090
Dunkle, William Fremont *533
Dunlaevy, E. P. 364

E

Eagan, W. F. 461
Easton, E. C. 650
Eaton, Milton *648
Edsall, W. S. 1059
Ekefalk, S. H. 650
Ellis, W. R. 460
Engstrom, E. W. 179, 761
Eppele, K. R. 461
Epperson, Joseph Bolen *458
Eshbach, Ovid Wallace ..... †462

F

Faught, Ray Clinton ..... †538
Fawcett, Charles DeVan ..... †1060
Fields, E. S. 178
Fink, D. G. 269
Fisher, J. H. 851
Fisher, W. C. 984
Fockler, W. G. 97
Foote, J. H. 761
Ford, F. C. 649
Fowler, Wendell Charles *981
Fralia, W. P. 537
Franklin, C. W. 761
Franklin, S. E. 364
Friis, H. T. 461, 984
Frink, R. E. 538

G

Gamble, L. R. 649
Gammell, John 650
Gaw, N. W., Jr. 650
Gear, R. B. *361
Gengelbach, W. K. 364
Gilbert, E. A. 461
Gilbert, John Joseph ..... †97
Gilman, William F. ..... †462
Gnuse, H. H., Jr. 1059
Goldner, F. G. 538
Goldsmith, L. M. 650
Gordon, E. F. 538
Gorham, R. C. 1149
Graff, Murray G. ..... †762
Greene, R. E. 538
Greenfield, E. W. 650
Grier, L. N. 985

H

Halden, G. R. 761
Hall, Wayne Curtis *758
Haller, G. L. 538
Hamann, C. E. 461
Hamilton, W. H. 360
Haney, R. L. 1059
Hansen, Albert, Jr. *1146
Hansen, C. W. 97
Harlow, James Hayward *759
Harrer, J. M. 461
Harris, Herbert, Jr. 538
Harrison, Arthur McCredie *458
Hawkins, Laurence A. ..... †762
Hazen, D. F. 364
Healy, W. L. 97
Helm, W. D. 1149

*Photograph.
†Obituary.

Henderson, E. W. 851
Henkels, H. W. 762
Herbig, H. F. 461
Herold, G. F. 461
Hertig, G. E. 537
Hickernell, L. F. *360
Hinch, W. H. 537
Hinson, Noel Bertram ..... †651
Hoberg, G. G. 97
Hodnette, J. R. 178
Hoefle, Alois *94
Hoeppner, H. L. 269, 650
Holmes, L. C. *361
Honnell, Pierre Marcel *177
Horne, A. N. 269
Horr, Ray Leckley ..... †851
Horton, J. W. 460
Hostetter, J. W. 650
Housley, J. E. 460
Howard, Otis 761
Howes, Robert ..... †462
Hoyt, Ray Stevens ..... †462
Hubbard, F. A. 538
Hull, A. B., Jr. 1059
Hull, D. R. 537
Hurd, Owen Wilson *981

I

Iaggi, Glen 1149
Ide, J. M. 761

J

Johnson, Ernest Albert *1057
Johnson, Ingolf Berger *536
Jones, Evan R. ..... †1149
Jones, John Lewis ..... †270
Jordan, J. P. 1149
Joslin, William Murray *94

K

Kanouse, Edgar Laroe *759
Kappel, F. R. 761
Kearney, J. W. 460
Kebby, M. H. 985
Kellogg, D. S. 650
Kelly, K. J. 984
Kempf, Karl 1148
Kempf, K. G. 460
Kerner, J. R. *361
Killgore, C. L. 537
Killian, Stanley Charles *982
King, Morland ..... †538
King, R. E. 1059
Kirby, R. E. 270
Kirschbaum, H. S. 178
Knost, C. P. *364
Knowles, Dewey D. *94
Kopan, R. I. 461
Kramer, A. W. 460
Krieg, E. H. 538
Kucera, C. F. 762
Kuhn, R. J. 460
Kuhnel, D. S. 650

L

Lamb, Francis Xavier *648
Larsh, Everett Paul *982
Leacock, George David Young ..... †538
Lee, Carl ..... †179
Lee, Marvin 984
Leet, C. H. 984
Lesnick, R. N. 985
LeVelle, Alfred Stamford ..... †364
Levy, D. H. 460
Lewis, W. A. *362
Lind, L. L., Jr. 538
Linder, C. H. *353
Lindseth, E. V. 1059
Lloyd, Tom Cox 759
Loomis, Robert Olwine *648
Loper, William B. *648
Losie, W. E. 364
Lott, Harry Able *759
Lyons, Harold 1059

M

Maas, A. W. 461
MacCarthy, Donnell D. *1146
MacDonald, Angus 460
MacGuffie, C. I. 650
Madill, J. T. 537
Mahrous, Haroun 762
Marshall, Donald Edward *95
Martin, H. C. 269
Mason, C. Russell *1147
Maxian, John, Jr. *95
McClellan, L. N. 460
McElfresh, W. G. 538
McGuire, J. V. 270
McLaren, G. W. 179
McLean, Corbett *1058
McNair, J. W. 270
Meese, W. G. 650
Melvin, H. L. 460
Merdinger, E. H. 1148
Metcalf, Charles Nelson ..... †651
Meyerhoff, Louis *760
Millard, T. O. 650
Miller, F. L. 270
Millican, George Whelpley ..... †462
Milne, G. R. 269, 761
Milne, Winford G. ..... †179
Mitchell, H. F., Jr. 1148
Mohr, M. E. 1148
Moncrief, David Melville, Jr. ..... †97
Monseth, I. T. *362
Moore, Edward Royal *649
Morgan, J. M. 538
Morris, R. E. 364
Morton, Walter B. ..... †851
Muller, C. R. 985
Munster, A. C. 179
Murphy, Timothy Henry ..... †651
Murray, J. M. 461
Mutschler, W. H. 179

N

Neher, John Hutchins *760
Neidig, R. E. 650
Nelson, J. M. *362
Norell, Elmer G. *760
Norton, R. B. 461

O

Ogden, F. M. 984
O'Laughlin, M. J. 1059
Oliver, J. H. 1059
Olsen, William 461
Omin, William W. ..... †1060
Osenbaugh, Chester Lamott *459
Osgood, Harry Whitney ..... †179
Osterle, W. H. 985
Ottmar, Jerome 538

P

Paluev, Konstantin K. ..... †851
Parker, C. W., Jr. 984
Patterson, Lucius Lamar ..... †651
Paul, E. E. 461
Paull, J. C. 1059
Peck, C. E. 761
Petzinger, Ambrose John *95
Pierce, R. E. 460
Pinkerton, D. C. 538
Pique, Z. W. 1149
Pittman, Paul 851
Plate, W. J 538
Poore, Jack Ralph ..... †462
Porter, Waldo 460

R

Ragazzini, J. R. 650
Randall, Ralph 851
Redford, J. L. 461
Redwood, W. J. Moulton 178
Reed, Lyman Coleman ..... †364
Rempt, Henry 1149
Renberg, W. W. 851
Rettger, W. V. 969
Roberson, D. A. 762
Robertson, R. E. 851
Robinson, P. H. *760
Roby, F. H. 179, 1059
Rode, N. F. *365
Roe, Fremont Lee *536
Rogers, Archie Clifton ..... †985
Roman, Walter Cuy *982
Rudenberg, Reinhold 269
Ryder, J. D. 269

S

Schaefer, L. C. 650
Schatzel, R. A. 1059
Schenck, H. H. 364
Schifreen, Clement Solomon *459
Schlossberg, Victor E. *536
Schneider, F. J. 537
Schoch, E. R., Jr. 97
Schwennesen, D. O. 985
Scott, A. H. 851
Seaman, Joseph Winfield *983
See, P. G. 97
Sellers, Lester Ralph *983
Shaad, Paul Emerson *982
Shaw, M. R. 1059
Sheehan, J. E. 538
Shepherd, Robert Vincent *95
Sheppard, H. H. 538
Shipley, Frank Foster ..... †1060
Sixtus, E. F. 179
Skinner, W. G. 179
Slichter, Walter I. ..... †1149
Smith, Charles Leo ..... †179
Smith, Clifford Allen ..... †179
Smith, J. S. 364
Smith, R. H. 97
Smith, S. B. 460
Smith, W. T. 461
Snively, Howard Donald *95
Snyder, E. H. 761
Sommers, O. W. 538
Speakman, E. A. 461
Sprague, R. C. 650
Starr, E. C. *363
Steen, J. R. 1059
Stegner, A. L. 537
Steiner, Harry Carlton *96
Stevens, Richard Francis *649
Stiles, Arthur Molyneaux ..... †851
Strasbourger, J. C. 537
Stringfield, Theodore W. *1147
Stringham, L. K. 1148
Strojny, Ferdynand M. W. ..... †651
Stueve, Winfred Henry ..... †270
Sultzer, Morton 762
Sutter, W. E. 537
Swift, W. B. 850
Swope, Gerard ..... †97

T

Taylor, George J. *983
Teasdale, A. R. 460
Tebo, G. B. 269
Tenney, George C. *96
Terry, W. M., Jr. 179
Third, D. G. 1149
Tiezzi, A. A. 179
Titus, Charles Hoff *537
Tomokins, J. S. 762
Travis, Dr. Irven 1059
Trevitt, John H. ..... †762
Trucksess, David E. *1058
Tudbury, C. A. 460

V

Van Allen, R. L. 179
Van Ness, Bartow, Jr. 984
Vaughan, Frank P. ..... †1060
Voight, John Petermann ..... †651

W

Wagner, C. F. 1058
Wagner, R. N. 985
Wagstaff, Robert Rhamy *1147
Wall, H. F. 1148
Walton, Edwin R. ..... †1060
Warner, A. J. 537
Warner, Leslie Thomas ..... †1149
Warren, H. H. 985
Warren, Mead, Jr. 460
Watts, Thomas Raymond ..... †462
Way, H. E. 538
Wearly, W. L. 179
Webb, D. W. 270
Webb, H. E. 97
Webb, Wilbur L. ..... †270
Weber, Ernst *178
Weigt, J. W. 985
Welch, T. R. 538
Welch, William, Jr. 538
Wells, Walter Farrington ..... †1060
Wenstrate, Millard C. *459
White, H. J. 461
White, William C. *1148
Whitmore, Carl ..... †1149
Whitney, Willis Rodney ..... †270
Wigton, W. B. 762
Willcox, Dale 985
Williams, E. M. 461
Williams, Everard Mott *983
Wilson, B. A. 762
Wilson, E. W. 851
Wilson, Myron S. *1147
Wilson, R. C. 1149

Z

Zane, R. B. 460
Zito, Albert Francis ..... †1060
Zohn, C. J. 179